

Slap on the writs: the return of Katakis - p3

FREE with ACE • Dec '88

NEW COMPUTER EXPRESS

First news, first reviews - every week

Special
preview issue
free with ACE

£99 ST

"I am the most important person in the software industry" Is he? -

page 30

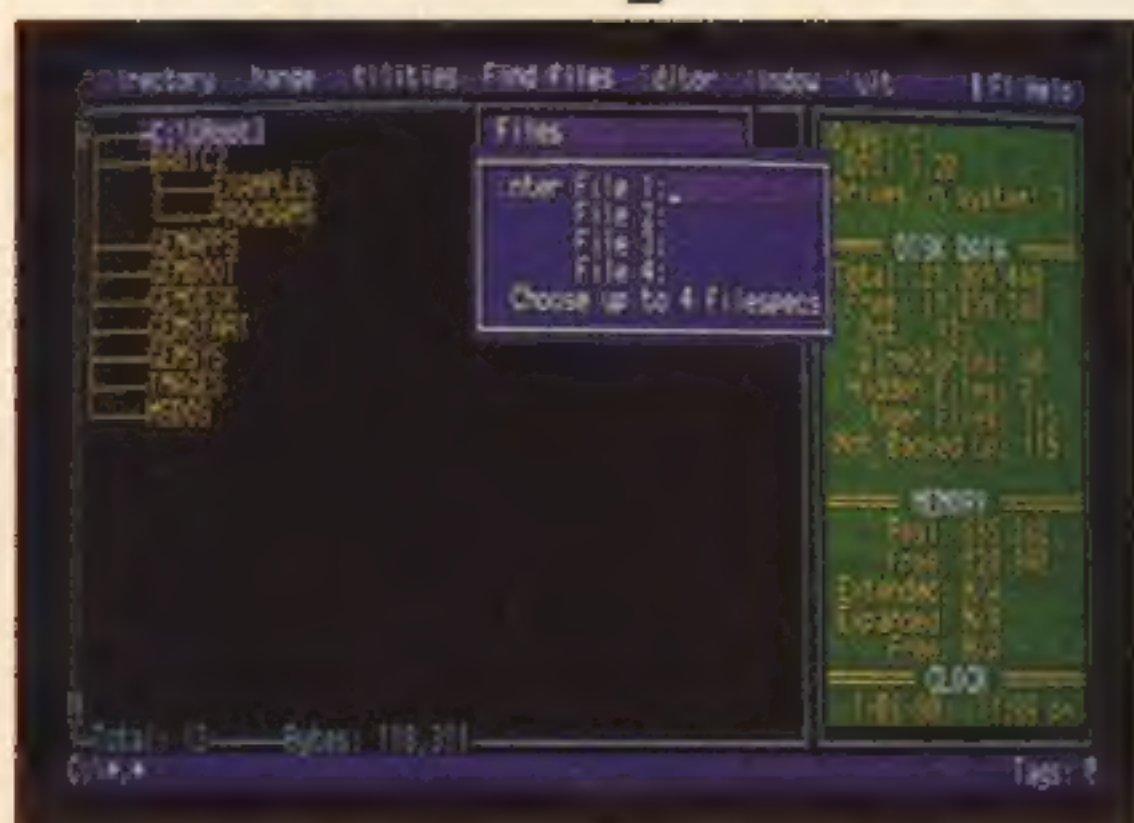
HAAIEEEE!



FIRST review of
the incredible
Last Ninja II •
page 16

EXCLUSIVE: 16-bit console shock

PC Helpers



Friendly front-ends for
MS-DOS - page 13

SPECIAL SECTIONS FOR:

Amiga • Amstrad CPC •
Amstrad PCW • Atari ST •
BBC • C64 • MSX • PC • QL •
Spectrum

See page 22

Charts 3 • Beginners 14 • Entertainment 16 • Tech Tips 20 • PSsst 30

Express Analysis

The stories that come out of the railway sidings at Slough are rarely less than astounding and if Atari could just release product to match the quality of the pre-announcements, it'd take the world by storm.

(Seen any Atari CD-ROMs in your High Street dealers yet? What about the ultra-cheap laser printer? The price-busting Mega STs? Any of the much-vaunted blitter upgrades?)

As it is, what are we to make of the news that Atari is to take its best-selling computer, turn it into a dedicated games console, and sell it for about a third of its current price?

The first observation is that this looks clearly like an American idea. Consoles have been a bigger success in the US than in Britain, largely because there's room in the US home for a dedicated games machine.

Second, such a move probably makes sense in the US, where sales of the ST have been distinctly underwhelming. Atari may expect to sell more \$199 ST games machines than it can sell ST computers.

But it seems equally obvious that such a scheme is a nonsense in the British market. Consoles gasped their last several years ago when the first enthusiasm for computers made best-sellers of the Spectrum, Vic-20 and BBC Micro. And although Sega, Nintendo and Atari claim to detect signs of life, the patient still looks distinctly comatose.

For the vast majority of computer owners, consoles represent a step backwards. Sure, you can play arcade conversions, but you can do that on a C64, an Amiga or on an ST. You can also play adventures, run graphics packages and music programs, write letters and use any of dozens of other applications. On a console, you can do none of these.

Turning the ST into a console has its points only if you've got something else to take its place. Atari hasn't. With memory chips rarer than a politician's kept promise, the Mega STs aren't going to be pouring off the production lines. The Transputer Workstation is a long way (and about £2,000) from being an ST replacement.

The ST console may be coming, but you can bet you won't be able to buy one next year.

Holidays in the sun

Commodore eyes students for low cost Amiga offer

Students may soon be able to buy Commodore's Amiga or one of its PCs at discount prices.

Talks are currently underway which would either offer students a 'pay after you graduate' loan or would simply make the machines available at sub retail prices. Seemingly both the Open University and the National Union of Students are involved in tentative discussions.

The offer will not differ dramatically from that made by the NUS and Midland Bank whereby students can buy up to £1,000 worth of Amstrad kit. They then simply pay interest while at college, with proper payments beginning on graduation.

The Amiga's well documented graphics capabilities appeal to art and design students as well as the powers-that-be in the Department of Education and Science. It seems likely that Commodore's ultra low cost PC1 will also be on offer. It currently retails at little over £300, making it among the cheapest PCs.

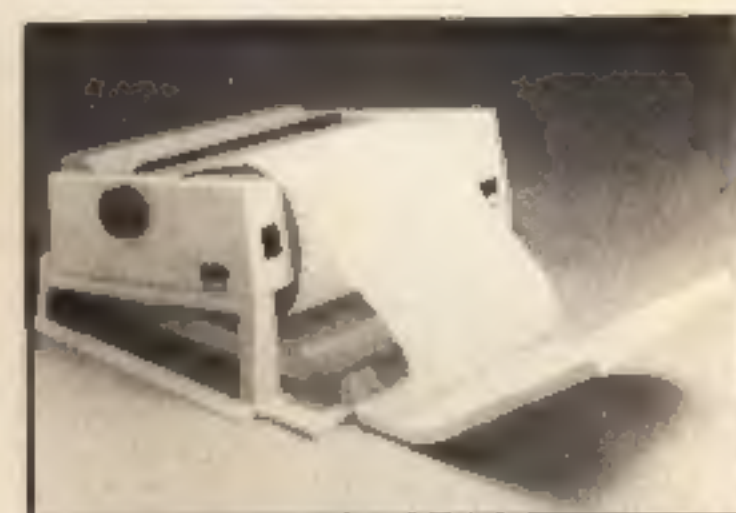
● PC1: Students deal?



Accodata stands around

Accodata's crusade for making life that little bit easier continues.

The computer consumables firm has launched an £18 printer stand which incorporates essentials such as paper catcher and what is bafflingly described as "the optimum angle for ease of monitoring". Apparently foam pads also cut down noise.



● Accodata's stand: Essential?

Scan to fax

The latest addition to the growing number of handheld scanners is Kempston's Daatascan.

Costing £275 it can pick up images from newspapers, photographs, books; save them onto a DTP program on the ST and print out on an Epson or compatible printer. Daatascan images can also be incorporated onto Kempston's filofax compatible "Daatafax" organiser.

Training queues

A new series of training courses are now available through ComputerLand's 21 learning centres. Popular subjects for the moment include CAD and DTP. ComputerLand isn't promising a fun time but seemingly 6,000 people went last year.

Gold ties Indiana Jones

The next batch of titles from Lucasfilm Games, George Star Wars Lucas' software arm, are to be published here by US Gold.

Previously handled mainly by Activision in the UK, the US firm has geared up its development program with US Gold expecting to launch six Lucasfilm games next year as well as a batch of big name

be releasing any film titles licenced onto arcade machines including the rights to any Star Wars films which might emerge.

US Gold is currently "sitting on" two titles: *Zak McKracken and the Alien Mindbenders* features an involved movie type scenario 'starring' a seedy reporter for a Sunday Sport type magazine (Zak) who stumbles across real space invaders. *Battlehawks 1942* is an air combat simulation cum arcade game based above the Pacific.

Indiana Jones goes on Cinema release here late next summer - the game should follow soon after.

Lucasfilm Games itself has recently changed its course. In the past its titles were published by the likes of Electronic Arts and Epyx in the US. Now though the firm is taking care of its own affairs.

Douglas Glen of Lucasfilm called US Gold a "strong publisher" adding that he hoped to continue in the UK through that firm on a long term basis. US Gold's boss Geoff Brown unsurprisingly described the games as "terrific".

On Lucasfilm's switch from Activision to Gold he offered: "Maybe they like us better than Activision."



● Zak McKracken: leading Lucas bunch

movie licences.

The Birmingham company is now beginning work on *Indiana Jones: The Last Crusade*. Gold will

NEW COMPUTER EXPRESS

EDITOR

Peter Worlock

NEWS EDITOR

Colin Campbell

REVIEWS EDITOR

Andy Storer

STAFF WRITER

Rik Haynes

PRODUCTION EDITOR

Rod Lawton

ART EDITOR

Julia O'Shea

ADVERTISING MANAGER

Mark Salmon

ADVERTISING SALES

Jenny Evans • Sophie Lankenau

PUBLISHER

Greg Ingham

Future Publishing Ltd

4 Queen Street, Bath, BA1 1EJ

Tel: 0225 446034 Fax: 0225 446019

Printers: Redwood, Trowbridge, Wilt

Distribution: Seymour Distribution

334 Brixton Road, London SW9 7AG

Tel 01-773 4444

© Future Publishing Ltd 1988

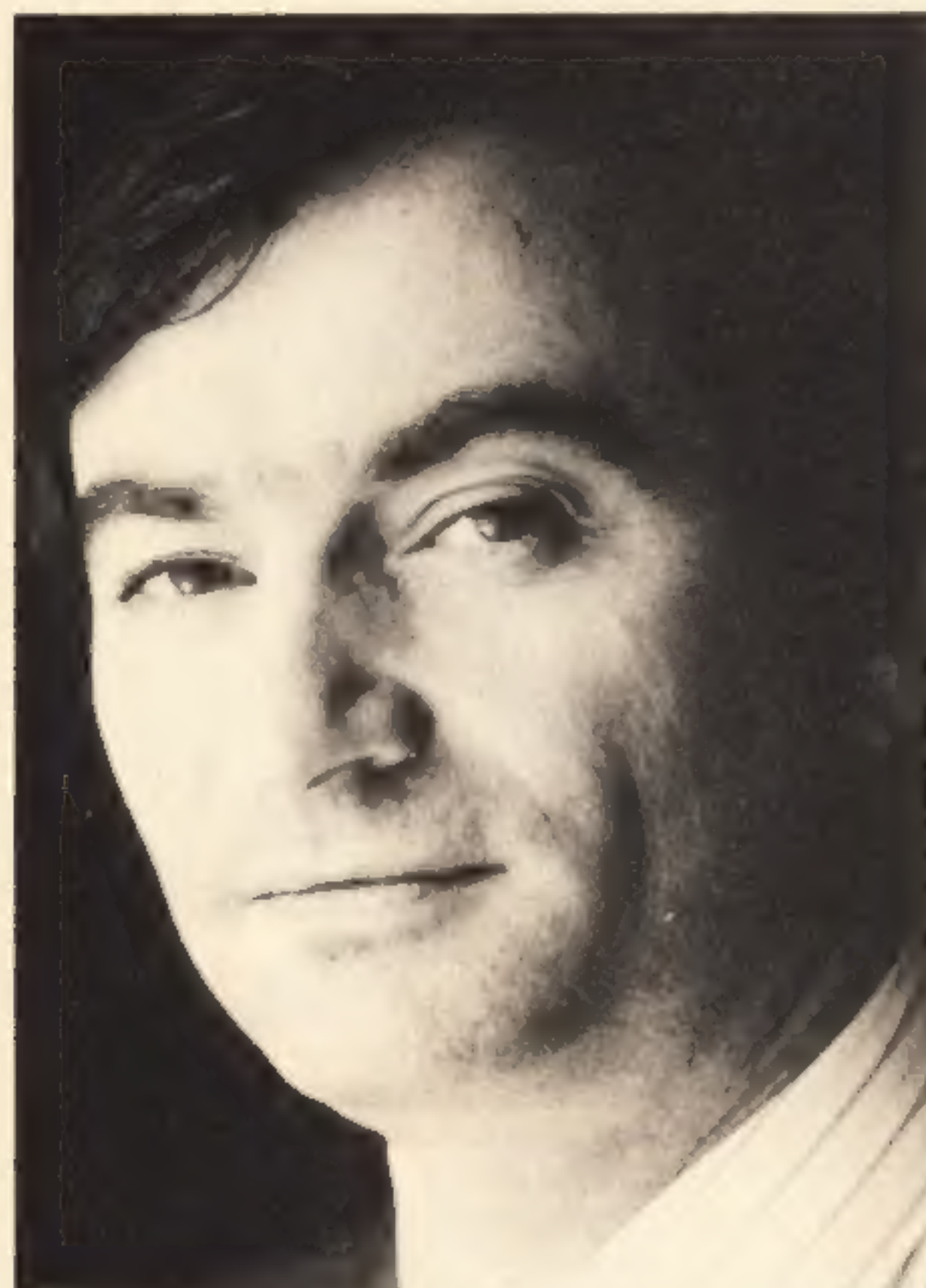
No part of this publication may be reproduced in any form without prior permission.

ATARI PLANS £99 ST GAMES CONSOLE

Atari will launch a games console next year based on existing ST hardware and priced at a competition-busting price tag of £99, UK boss Bob Gleadow has told Express.

The initial launch will be at the New York Toy Fair next January, with first supplies of the console through the major high street chain stores in the early summer. However, it won't be until the autumn that the machine will be fully available.

The company is hoping that the cream of the existing



● Gleadow: Heralding in 16-bit console.

ST software will be converted to cartridge format, probably not a difficult process at least for straightforward arcade games. Obviously, adventures and other games relying heavily on keyboard input will be ruled out. At present, Atari is talking about a £25 price tag for the cartridges.

"We will be launching a 68000-based console in '89," confirmed Gleadow, "but there's no point in having full distribution before September."

He added: "The idea is to launch it at the Toy Show and start selling to multiples in May."

The big question is why Atari should want to introduce such a system. If it's a success it can only hurt the 520ST which the company can continue selling at £299. If it isn't expected to succeed, why bother?

But Atari's move should heat up the looming 16-bit console war. Sega is also launching a 16-bit console into the UK at around the same time, and Nintendo claims that it too will offer a 16-bit model, although that won't be seen here for another two or three years.

Weish joystick manufacturer Konix is also working on a console, reported to be due for launch in January. The firm is being secretive about developments though; when quizzed on the subject one senior employee offered: "I don't know what you're talking about."

However, several software houses have apparently seen the console, and reaction is rumoured to be very positive. Price should be just on the high side of £100, which is competitive with existing Sega and Nintendo consoles.

Microsoft saves manual labour



● CD-ROM: Programmers tool

Programmers bogged down by tons of manuals can now take heart that Microsoft is soon to launch more than 20,000 pages of reference on a CD-ROM disk.

Containing 48 books and technical publications the disk is apparently indexed and cross referenced for fast retrieval. All material can be copied directly into programs without rekeying.

Microsoft says that such a device is essential for today's programmer who is juggling a plethora of languages and environments. It currently retails at \$395 Stateside. When it will be launched here is not yet clear.

Books contained on the compact disk include *Inside OS/2*, *Programming Windows*, *The MS/DOS Encyclopedia* and *Proficient C*.

An Alternative winter pastime

With the cold and grey winter months approaching it only seems logical that the best thing to do is...play cricket.

Audiogenic's long-time masterpiece *Graham Gooch's Test Cricket* is due out from Alternative at £1.99. Alternative reckons the game will go

down a treat given that Gooch himself is leading our world renowned cricketers toward a glorious tour of India.

Well, up to a point. Someone ought to tell those chaps at Alternative that the tour has been postponed indefinitely in a swirl of ugly controversy.

Katakis: One foot out of the grave



● Katakis: Recast, rewritten and re-released?

The spectre of the stifled US Gold/Rainbow Arts game *Katakis* still looms.

Seemingly US Gold is pondering releasing a new game born "out of the ashes" of *Katakis*. That title - if it appears - will be *Denaris*. Germany based Rainbow Arts is in the process of re-writing the game and presenting it to Gold which licences Arts' products for the UK.

Katakis was taken off the UK market two months ago after Activision called in its legal people claiming

the game was a direct rip off of *R-Type*. Gold is cautious enough to warn Rainbow Arts that if *Denaris* resembles *R-Type* in any way it will be rejected immediately.

"Rainbow Arts sends us product and if it's good then we take it but not if it's no good," said Gold's David Baxter. "I told Rainbow Arts two months ago that *Katakis* is not a product we want to release. It needs to be re-written."

However, if *Denaris* does not resemble *Katakis* it's hard to see

how Rainbow Arts can flag it as a direct descendent. "*Katakis* got a lot of publicity," explained Baxter. "It had excellent reviews presumably because it's a better a game than *R-Type*."

He added: "It's really a marketing ploy - the game Activision tried to ban..." For Activision, UK boss Rod Cousens warned that any such game faintly resembling *R-Type* would result in renewed legal action and moves would be made to take it off the market.

Stratum sprints to PPC hard disk

An internal hard disk is soon to be launched by Stratum Technology.

It is internally interfaced and powered and can apparently easily replace one of the portable's 3.5 inch disk drives. Stratum is currently beaver away to finish the Sprint 20 by the end of the year when it will cost little under £500.

Cheetah flexes muscle

Joystick manufacturer Cheetah is going into full predator mode.

Far Eastern importers are being warned that if any of their joysticks break Cheetah's patents, royalties will be sought. In particular, Cheetah is looking carefully at infra red joysticks.

Cheetah apparently paid £5,000 for such a patent (which doesn't cover normal light guns) four years ago when it launched the Ratt infra red joystick. Boss Howard Jacobson, though, is hoping that his competitors will make a success of their ventures.

"We're not going to jump in and say 'stop selling these'. I hope they sell millions and we'll go for our share of the royalties," said Jacobson. Cheetah is currently checking with legal people how strong the patent is and which products it covers, including the possibility of it covering infra red guns.

Acorn fired up

Acorn's Archimedes is becoming increasingly popular in the most curious environments.

The latest order the firm is parading is to an artillery training centre in Ireland. Seemingly, trainee gunners get to demolish targets by working out grid references and the like on a system enticingly named the Westland Indirect Fire Trainer.

We are assured that the Archimedes also runs a full sound and graphics simulation of the shot.

Archimedes gets a Basic boost

BBC Basic V on the Archimedes is no slouch, but like all interpreted Basics it hardly allows you to get the most from the machine. Dabs Press has a welcome solution in the form of ABC - the Archimedes Basic Compiler.

ABC will take a standard Basic V program and compile it to a stand-alone machine code file. Dabs claims almost complete compatibility with existing Basic syntax, so programs can be tested and debugged in the interpreter before compilation.

The crucial factor, though, is speed and ABC appears to do the business: Dabs is claiming increases in execution speed of up to 4000%, with most benchmarks running between 10 and 30 times faster. If you need more speed, ABC allows the use of in-line assembler within programs.

Written by Paul Fellows, head of the team responsible for Arthur, ABC will be available from next week, at a price of £99.95 inc VAT.



ARCADE ACTION FOR RAINBOW ARTS

Another software house has decided to try its hand at arcade machines.

Following MicroProse's moves into that area in late summer German publisher Rainbow Arts is set to launch three arcade machines. They should be set up here by the middle of next year.

And the games will be appearing on popular home computers - including PCs - by Christmas '89 through US Gold. Gold though is not involved in the arcade machine venture directly.

Apparently the hardware has already been developed. Rainbow Arts is keen to stress that it is not based on machines such as the Amiga or ST as has been the case with one other arcade machine manufacturer.

First out will be a "Ghosts and Goblins type game" called *Dark Chamber* followed by *Monster Olympics* - a comic style sports affair. The third game has yet to be named.

"We've tied up good graphics and games designers for this," commented managing director Mark Ullrich. "They've done games such as *Giana Sisters* and *Garrison*."



the arcades: Rainbow Arts to move in

On the software releases Ullrich commented: "We want the games to become popular in the arcades before we release computer versions."

Rainbow Arts expects to have 2,000 machines in place throughout Germany of each game. A similar number can be expected for the UK.

CHART ATTACK

TOP TEN full price

			SPECTRUM	ORA	ST	AMIGA	PC	BBC	ATARI	MSX	C16	AMSDUC
1	1	Daley Thompson's Olympic Challenge	Ocean	•	•	•	•					•
2	4	Starglider 2	Rainbird		•	•						
3	3	Football Manager 2	Addictive	•	•	•	•					•
4	N	Elite	Firebird	•	•	•	•	•		•		•
5	8	Out Run	Sega/US Gold	•	•	•						•
6	6	Barbarian 2	Palace		•							
7	5	Track Suit Manager	Goliath	•	•							•
8	■	We Are The Champions	Ocean	•	•							•
9	7	Gold Silver And Bronze	US Gold	•	•							•
10	2	1943	US Gold	•	•							•

Italics - last weeks position

TOP TEN budget

1	1	Bomb Jack	Encore
2	2	Joe Blade 2	Players
3	7	Ace Of Aces	Kixx
4	3	Gauntlet	Kixx
5	■	Frank Bruno's Boxing	Encore
6	4	Air Wolf	Encore
7	■	European Five A Side	Firebird
8	R	Yogi Bear	Alternative
9	6	ACE	Cascade
10	5	Battleships	Encore

Italics - last weeks position

Your quest is interstellar wealth and to hell with glory



The universe stretches before you. 8 million worlds await your exploitation. Unimaginable wealth is your destiny. If you can master the art of interstellar navigation, harness the intricacies of the photon drive and repel the deadly space pirates. Forget the medals, forget the honours, forget the glory. As a member of the Federation of Free Traders you live for money and will probably die for it.



ATARI ST/AMIGA
£29.99



Screenshots from Atari ST version.
ILLUSTRATION BY/© ANDREW JONES.
COPYRIGHT © SOLARWIND LIMITED
Gremlin Graphics Software Ltd.
Alpha House, 10 Carver Street,
Sheffield S1 4PS. Tel: 0742 763423

MAIN EVENT

ATARI ST

Football Manager 2	10.50
D. T. Olympic Chall.	13.90
Elite	13.90
Rocket Ranger	20.60
Pool of Radiance	17.45
Virus	13.90
Pacmania	13.90
Great Giana Sisters	13.90
Federation of Free Tracks	20.60
Super Hang-On	13.90
Hostages	17.45
Starfighter 2	17.45
Star Ray	13.90

AMIGA

Football Manager	10.50
Fernandez Must Die	17.45
Elite	17.00
Rocket Ranger	20.60
Pool of Radiance	17.45
Menace	13.90
Netherworld	13.90
Carrier Command	17.45
Federation of Tracks	20.60
Pac Mania	13.90
Where Time Stood Still	17.45
Bionic Commandos	17.45
Starfighter 2	17.45

SPECTRUM

Football Manager 2	4.99
R-Type	6.90
O.F. Repulsion	5.50
Ninja 2	8.99
Salamander	6.29
Super Hang-On	6.95
O.T. Olympic Chall.	6.99
Psycho Pig UXB	6.29
Ray of Rovers	5.59
Intensity	5.59
Fernandez Must Die	6.99
G.L. Superskills	5.59
G.L. Hotshot	5.59

COMMODORE 64

Football Manager 2	4.99
R-Type	6.90
Ninja 2	8.99
Bubble Ghost	6.90
Salamander	6.29
We Are Champions	6.99
D.T. Olympic Chall.	6.99
Summer Olympiad	6.99
Psycho Pig UXB	6.99
Rex	8.29
Fernandez Must Die	6.99
G.L. Superskills	6.90
G.L. Hotshot	6.99

AMSTRAD

Football Manager 2	3.79
Ninja 2	8.99
Fernandez Must Die	6.99
G.L. Hotshot	8.99
G.L. Superskills	8.99
Ray of Rovers	6.99
Overlander	6.99
Super Hang-On	6.99
Super Sports	6.99
Dark Fusion	6.99
Psycho Pig UXB	8.99
D.T. Olympic Chall.	8.95
Echelon	8.99

LATEST SOFTWARE KNOCKOUTS

COMMODORE 64

Jack the Nipper	2.50
Last Mission	2.50
Decaptor	2.50
Fields of Fire	2.50
Knight Games II	2.50
Ortopolis	2.50
Quartet	2.50
Super Sprint	2.50
Firetrap	2.50
Back to Future	2.50
Sporting Classics	2.50
Ace	2.50
Mystery of Nile	2.50
On The Tiles	2.50
Sidewize	2.50
Scary Monsters	2.50
Solomon's Key	2.50
Pygar	2.50
Trentor	2.50
Blade Runner	2.50
Captain America	2.50
Five Star Games 2	2.50
Star Wars	2.50
Marble Madness	2.50
Arac	2.50
Leaderboard	2.50
Pit Stop	2.50
Scoby Doo	2.50
Ping Pong	2.50
Tag Team Wrestling	2.50
Gauntlet	2.50
Sauntlet Deeper Dug	2.50
Donkey Kong	2.50
Breakthru	2.50
Short Circuit	2.50
Bombjack II	2.50
Football Manager	3.95
Super Sunday	3.50
Head Coach	3.50
President	3.50
Jet Set Willy	3.50
Soldier One	3.50
Shadowline Road	3.50
Gridiron/Paradroid	3.50
PSI Trading	3.50
Ramparts	2.50
Paradox	3.50
Legend of Kage	3.50
Hacker 2	3.50
V	3.50
Head Over Heels	3.50
Zaxxon	3.50
Mule	3.50
Space Shuttle	3.50
Pirfall	3.50
Kensington	3.50
Robotron	3.50
Zorro	3.50
Wizard	3.50
Shockway Raider	3.50
Crystal Castles	3.50
Kewels Darkness	3.50
Boulderdash Con. Kit	3.50
Road Runner	3.50
Renegade	3.50
Star Games II	3.50
Flightpath 737	3.50
Thundercats	3.50
Bubble Bobble	3.50
Buggy Boy	4.75
Space Harrier	4.75
Addictball	4.95
Frankenstein	2.50
I Alien	2.50
Vengeance	2.50
Discovery	2.50
Jet Boys	2.50
Time Fighter	2.50
Thunder Cross	2.50
Mandroid	2.50
Gink	2.50
Wolfman	2.50
Stratton	2.50
Traction	2.50
Book of Dead	2.50
Life Force	2.50
Big Trouble in China	2.50
Superster Ping Pong	2.50
Paradroid/Undium	3.50
The Young Ones	2.50

COMMODORE 64

Olives Follies	1.75
Web	1.75
Real You	1.75
Slurpy	1.75
Amurota	1.75
Arcadia	1.75
Galactic Gardener	1.75
World Cup Football	1.75
Pyramid	1.75
Beaky & Egg Snatcher	1.75
Golf	1.75
Titanic	1.75
Rataplait	1.75
Nelson	1.75
Ah Conder	1.75
Egbert	1.75
Fabulous Wanda	1.75
Wild West	1.75
Eureka	1.75
Spys Demise	1.75
Street Machine	1.75
Zip	1.75
Destruct	1.75
Osmium	1.75
Aquanaut	1.75
Dantes Inferno	1.75
Hartland	1.75
Puzzar	1.75
PCW Games Col	1.75
Biology	1.75
Geography	1.75
History	1.75
German	1.75
Gortex	1.75
Quake	1.75
PSI Warrior	1.75
Auriga	1.75
Velocapede	1.75
Fungus	1.75
Desert Hawk	1.75
Ronald Robberduck	1.75
Electric	1.75
F.A. Cup	1.75
Tomahawk	1.75
Batolys	1.75
Scrolls of Abaddon	1.75
Crazy Coaster	1.75
Toad Force	1.75
Clean Up Time	1.75
F.A. Cup '87	1.75
Forecast	1.75
Project Planner	1.75
Numbers at Work	1.75
Decision Maker	1.75
Entrepreneur	1.75
Flying Feathers	1.75
Kick Off	1.75
O Level	1.75
Code Name Matt 2	1.75
Chinese Juggler	1.75
Encounter	1.75
Night Shade	1.75
Broad Street	1.75
Pyramid/Titanic	1.75
Beaky/Rataplait	1.75
Software Star	1.75
Rack 'n' Bolt	1.75
Morden's Quest	1.75
Forbidden Forest	1.75
Paric	1.75
Zim Sala Bam	1.75
Hampstead	1.75
Sentinel	1.75
Adrian Mole	1.75
Enigma Force	1.75
Stanon	1.75
Assault Machine	1.75
Warrior II	1.75
Stock Car	1.75
Cyberton Mission	1.75
Bumblebee	1.75
Felix in Factory	1.75
Frenzy	1.75
Ghouls	1.75
Swoop	1.75
Election	1.75
Sherlock Holmes	1.75
Paradroid	1.75
Hide and Seek	1.75
Moon Shuttle	1.75

COMMODORE 64 DISC

Vengeance	4.50
The Real You	1.50
Project Ranger	1.95
Forecast	1.95
Numbers at Work	2.95
Decision Maker	2.95
Fantasy Five	2.95
Suspended	2.95
Dandy	3.45
Wild West	3.95
Bug Boyz	3.95
Murder Zindemul	3.95
Touchdown Football	3.95
Basketball	3.95
GFL Football	5.95
Express Raider	3.95
Knight Games II	4.50
Octopus	4.50
Gunslinger	4.50
Alternate Reality	6.90
Baker Street	4.50
Cross Cheque	4.50
Captain America	4.50
Future Finance	4.95
Alter Ego Female	9.45
Deathscape	4.95
Gobots	4.95
Hybrid	4.95
Pile Up	4.95
Blackmagik	4.95
Winter Games	4.95
Elite Collection	4.95
Int. Karate	4.95
Headcoach	4.95
President	4.95
Golden Oldies	4.95
Pub Games	4.95
Football Manager	3.95
Arac	3.95
Mandroid	4.50
Plasmatron	4.50
Dink	4.50
Traction	4.50
Thundercross	4.50
Jack the Ripper	4.50
Frankenstein	4.50
Time Fighter	4.50
Ninja Master	4.50
Discovery	4.50
Jet Boys	4.50
Wolfman	4.50
Life Force	4.50
I Alien	4.50
Callit	P.O.A.
Biograph	P.O.A.
Homepak	P.O.A.
Cut 'n' Paste	8.95
Football Manager 2	7.95
Challenge/Gobots	4.95

AMSTRAD DISC

Pub Games	5.95
Spin-Dizzy	4.95
Trailblazer	4.95
Ballblazer	4.95
Hacker	4.95
B. McGuigan Boxing	4.95
Baseball	4.95
GFL Football	4.95
Basket Ball	4.95
Blackmagik	4.95
Express Raider	4.95
Killed of the Dead	4.95
Roadrunner	4.95
Saracen	4.95
Winter Games	4.95
Bombjack II	4.95
Thundercats	4.95
Mano Bros	4.95
Hybrid	5.95
Triads	5.95
Tarzan	3.50
Int. Karate	5.95
Amix Accolades	5.95
Book of Dead	4.50
Death of Glory	4.50
Federation	4.50
Frankenstein	4.50

AMSTRAD

The Real You	99p
Barrier Rafters	99p
Berks	99p
On the Oche	1.85
Ricochet	1.65
Death Kick	1.65
Forest at Worlds End	1.65
Sultan's Maze	1.65
Galactic Plagues	1.65
Melt Down	1.65
Killadee	1.65
Time Manager	1.65
Roland Goes Digging	1.65
Space Hawks	1.65
Egbert	1.65
Survivor	1.65
Speculator	1.65
Electro Freddy	1.65
BO Invaders	1.65
Code Name Matt II	1.59
Roland Ahoy	1.59
Split Personalities	1.59
Chopper Squad	1.59
Fighting Warrior	1.59
Dangermouse in DBL TBL	1.59
Dandy	1.59
Firelord	1.59
Defender of Dix	1.59
Dynamite Dan	1.59
Rally Driver	1.59
Dan Dare	1.59
Frank Bruno's Boxing	1.59
Nexus	2.50
Star Commando	2.50
Manic Miner	2.50
Future Knight	2.50
Monty on the Run	2.50
Trail Blazer	2.50
Hijack	2.50
Greyfell	2.50
Traxos	2.50
Rana Rama	2.50
Leviathan	2.50
Electro Glide	2.50
Pub Games	2.50
Big Trouble in Little China	2.50
Ballblazer	2.50
Hacker	2.50
Nemesis	2.50
Winter Olympics	2.50
S.A.S.	2.50
Street Machine	2.50
Spy v Spy	2.50
Auf Weidersehen Monty	2.50
Ramparts	2.50
Saracen	2.50
Killed Until Dead	2.50
Knight Games II	2.50
Quartet	2.50
Super Sprint	2.50
Firetrap	2.50
Star Raiders 2	2.50
Ace	2.50
Mystery of Nile	2.50
Blade Runner	2.50
Space Harrier	2.50
Football Manager	3.45
Survivor	3.45
Way of the Tiger	3.45
Dragon's Lair	3.45
Zorro	3.45
Skyfox	3.45
Knight Raider	3.45
Space Shuttle	3.45
Kung Fu Master	3.45
Gauntlet	3.45
Sai Combat	3.45
Jewels of Darkness	3.45
Infiltrator	3.45
Road Runner	3.45
Winter Games	3.45
Wander Boy	3.45
Rock 'n' Wrestle	3.95
Shogun	3.95
Lord of the Rings	3.95
Howard the Duck	3.95
Renegade	3.95
Conway Raider	2.50
Bubbler	2.50

SPECTRUM

Hijack	2.50
Pub Games	2.50
Red Hawk	2.50
Greyfell	2.50
Deactivator	2.50
Hybrid	2.50
Bride of Frankenstein	2.50
Deadringer	2.50
Mountain Mick's Death Ride	2.50
Traxos	2.50
Killer Ring	2.50
Road Runner	2.50
Camelot Warriors	2.50
Tempest	2.50
Gun Runner	2.50
Rana Rama	2.50
Xarg	2.50
Jet Set Willy 2	2.50
Metabolism	2.50
West Epok	2.50
Cosmic Shock Absorber	2.50
Pulsator	2.50
Inheritance	2.50
Revolution	2.50
Rebellion	2.50
Grange Hill	2.50
Fifth Quadrant	2.50
The Force	2.50
Mandrill	2.50
Mind Shadow	2.50
Space Shuttle	2.50
Battle of the Plants	2.50
Friday the 13th	2.50
Hacker	2.50
Ballblazer	2.50
Go to Hell	2.50
Orbit	2.50
J. Barrington Squash	2.50
Rescue on Fractals	2.50
Dogfight Z187	2.50
Leviathan	2.50
Monty on the Run	2.50
Spin Dizzy	2.50
Hacker 2	2.50
Basketball Two on Two	2.50
Baseball	2.50
Sailing	2.50
Out of this World	2.50
Red L.E.D.	2.50
They Stole a Million	2.50
Xor	2.50
Supergran	2.50
Conway Raider	2.50
Auf Weidersehen Monty	2.50
Thing Bounces Back	2.50
Black Magic	2.50
Express Raider	2.50
Last Mission	2.50
Ramparts	2.50
Bubbler	2.50
Martianoids	2.50
Survivor	2.50
Gunslinger	2.50
Crystal Castles	2.50
Quartet	2.50
Firetrap	2.50
Big Trouble in Little China	2.50
Star Raiders 2	2.50

SPECTRUM

Timonag	1.50
Zip Zap	1.25
Harvester	1.25
Warlords	1.25
Stonkers	1.25
Into Empire	1.95
Dance Fantasy	1.95
World Cup Football	1.25
On the Oche	1.25
Snooker	1.25
Darts	1.25
Black Hole	1.25
Golf	1.25
Pyramid	1.25
Drive In	1.25
Beaky & Egg Snatcher	1.25
Doomsday Castle	1.25
Chess	1.25
Road Racers	1.25
Dimension Destructors	1.25
Video Pool	1.25
Casino Royal	1.25
Chess the Turk	1.25
Time Tunnels	1.25
PSI Games	1.25
Mother Ship	1.25
Cosmic Debris	1.25
Mission Impossible	1.25
Exterminator	1.25
Armagedon	1.25
Freeze Bees	1.25
Sam Spade	1.25

Amstrad in the Looking Glass

*LITTLE MORE THAN A MONTH
AFTER ITS LAUNCH THE PC200 SIN-
CLAIR PROFESSIONAL IS STILL
SOMETHING OF AN ENIGMA TO
HORDES OF GAMERS AND
AMSTRAD WATCHERS. COLIN
CAMPBELL TALKS TO THE LEISURE
SOFTWARE HOUSES AND FINDS
OUT HOW ENTHUSIASTIC THEY
ARE...*

The chin wagging brigade is up to its old tricks.

Amstrad's legions of self appointed experts and analysts have spent the last month or so babbling about the new beast – the Sinclair Pro or PC200 (depending on whichever name you prefer).

Not least among these prognosticators are the games publishers. They have the task of deciding whether or not Amstrad's curious beast is about to open up a glorious era of PC gaming.

A whole swathe of new computer users keen to spend lots of money on a format which has hitherto restricted itself mainly to the comparatively dull world of spreadsheets and such may be emerging.

At least that's the theory in this island. Elsewhere in the big bad world the PC format has long been regarded as the status quo for games.

So are the publishers ready to deploy all their games onto PC terrain? The obvious answer to that is yes.

Established PC owners (at least Amstrad ones) will know there's already a fair splattering of games available. By all accounts though they are dominated by the mature and thought provoking types with flight simulations riding highest.

But those eyeing the PC 200 as a real possibility (for gaming) can rest assured that even the more puerile titles so beloved of the British gamer will turn up on the PC eventually

Atlantic goal

From the software house's perspective the current situation is simple. There is a big market across the Atlantic for PC games so titles likely to appeal to Americans get transferred to PC anyway and hauled off. And US companies (EA, Mediagenic, Epyx, MicroProse et al) write all their games for the PC anyway and ship most of them over here.

Like many hardened gamers though the powers that be in the software house's top floor offices have their doubts about Amstrad's latest.

Firstly, it's the same price as an ST and palpably not as appealing as a games machine. Those currently staring balefully at their Spectrums and 64s are more likely to trade up to an ST or Amiga than a four colour Amstrad PC.

Secondly, there are now nine different Amstrad PCs between £300 and £600 (three PC200s, three 1512s, two 1640s and the low end 2086). That's not including the four versions of the portable within those parameters.

Thirdly, nobody in the know is at all impressed with the CGA monitor. It's hard to see the £399 mono version selling well to gamers and how good the TV link up on the £299 standard is yet to be ascertained. Again, four colour capability looks

a trifle weak beside the blazing blur of a decent ST or Amiga offering.

And yet the publishers will still support it heavily because, without getting too boring, they appreciate Amstrad's unbelievable skill at persuading the masses to fork out. Amstrad's marketing muscle is the envy of many a throbby corporation and awards have dutifully been bestowed on Mr Sugar for his well documented business acumen. The firm is currently gearing up for an absolute corker of an advertising campaign. And, despite perennial shortages, Amstrad's skill at getting hardware to market is unmatched in the low end PC arena.

Mum's the word

Apart from that the software houses have a suspicion that it won't be games players buying the machine but that old sector of the populace everyone loves to rely on – parents. That the kids will soon draft in games to replace awful education packages is understood by Amstrad and understood by the software houses.

"Experienced users will go for the ST or Amiga," thinks Alternative's boss Roger Hulley. "This is for first time computer users and for mum and dad."

"I didn't jump up and down when I saw the machine but with Alan Michael Sugar behind it..."

Alternative's full price offshoot Again Again is to make a debut foray into PCs with a new game after Christmas. Inevitably perhaps, it's a flight simulation (*Operation Hormuz*). Hulley reasons that the opportunities for releasing good ol' arcade games will be limited. "The IBM market isn't ready for that."

Those software houses preferring to play their cards close (ie. all of them) are saying that they will do their utmost to get the best out of the machine (etc. etc.). US Gold supremo Geoff Brown envisages the PC market opening up here. "It's the biggest format in the States," he said. And that counts for something since Gold is apparently having a good time of it over there with its Brit games.

Gold of course has four of its titles bundled with the PC200 so it's hardly surprising that Brown fully expects Amstrad to pull it off.

And while Gold is creaming it in the States Electronic Arts is furtively hoping for the PC to make its mark here. US software houses top brass have already filled their pockets with the riches of PC gamers Stateside and it doesn't take much to

PC200

pros...

Amstrad's marketing clout
Mammoth US market for PC software
Expandability
Good value - for a PC

...and cons

Poor value next to ST/Amiga
Four-colour graphics
Expandability is limited



● PC 200: Up against ST and Amiga?

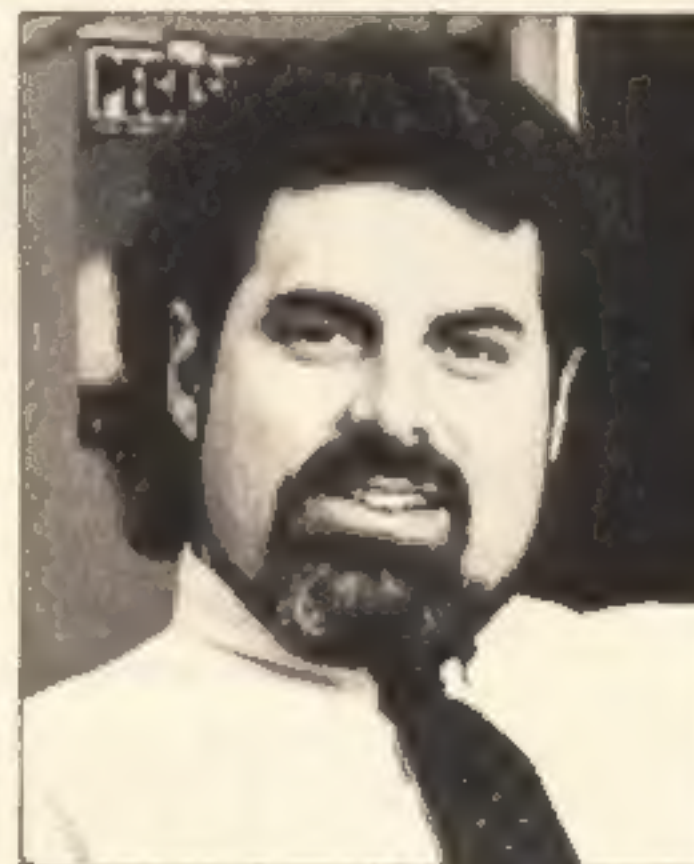
bung those games Europe's way.

EA's European operations director Mark Lewis enthuses: "We've been marketing PC games here since we started. But I've always thought that the PC user is one who wants to use the machine for a whole variety of things."

If you're a user you want entertainment as well as the ability to create. I suspect a lot of people will also use it for word processing and will have a database."

Lewis admits that the machine's colour capabilities will prove an obstacle but he's impressed with speed capability. "Chuck Yeager is faster on the IBM than on Commodore or Apple."

● Lewis: EA has traditionally supported PCs



Colouring the issue

Many are reserving judgment on the machine until they've actually seen it (which seems fairly sensible). Surprisingly, Ocean's boffins have yet to poke around inside the Pro's belly.

The firm's software development manager Gary Bracey is quick to point out that Ocean has been churning out PC games regularly for the past 12 months. "It would be nice to see the PC games area opening up. It needs to be more widespread and if this is the way to do it then fine."

On the colour capabilities he observes: "If the resolution is good then we can do nice things with it. Four colours is fine."

It's only fair to stress that Amstrad won't be pitching this as a games machine *solus*. It will be pitched as the ideal home computer for the whole family. Which isn't a million miles away from what the CPC was supposed to be.

But its appeal to the 25 to 45 age group is likely to be strong. It's easy to imagine many of them used to IBMs at work, wanting one for the home, and appreciating that younger members of the family can get some kicks out of it.

It's those younger members who the games publishers are watching closely. And their tastes aren't likely to differ enormously from other 16-bit counterparts.

Thanks for the memory

Andy Onions
Carrier Command • ST/Amiga

Carrier Command, programmed by Real-time Graphics, is a technical tour-de-force with a complete game universe – islands, buildings, ships, aircraft – depicted in fast, smoothly animated, solid-filled 3D. With *Starglider II*, it sets new standards for 16-bit entertainment.

But the company's roots are in 8-bit programming and it continues to produce excellent 8-bit software. Programmer Andy Onions is well placed, then, to discuss the differences.

"The main thing is that the 16-bit machines give you masses of memory. This means you can be very sloppy and write code that just grows and grows. Also, you can write code a lot faster on 16-bits because you don't have to be as careful with memory.

"However, the demand is for better graphics, and graphics eat up memory. With all that memory it would take you years to fill it with code, but you can fill it quickly with graphics.

"Next, the 16-bit machines give you



● Carrier Command - "ST version is a shade faster"

very powerful processors. But as soon as you start dragging large chunks of memory around, as you do with graphics, you lose the power you just gained. For example, the Spectrum display screen is about 6K, the C64 about 8 or 9K, the PC about 16K in CGA, but the ST and Amiga are 32K."

Surely the Amiga's dedicated graphic processors come in handy here? Apparently not: "From our experience on both the ST and Amiga versions of *Carrier Command*, the Amiga's dedicated hardware turned out not to be as much use as you might think. The blitter needs so much information in setting it up for use that the overhead negates any speed advantage. In fact, the ST version of *Carrier Command* is a shade faster than the Amiga on graphics."



● "Amiga hardware is not as much use as you might think"

Upwardly mobile programming

MORE AND MORE COMPUTER

OWNERS ARE MOVING UP TO 16-

BIT COMPUTERS. IF YOU JUST

WANT TO RUN COMMERCIAL SOFT-

WARE, YOU CAN ENJOY ALL OF THE

ADVANTAGES – EXTRA SPEED,

EXTRA POWER, EXTRA MEMORY –

WITHOUT ANY PROBLEM. BUT FOR

WOULD-BE PROGRAMMERS, IT'S

NOT THAT SIMPLE...

The first generation of microcomputers – Apples, Commodores, Sinclairs, etc – now collectively known as 8-bit systems, used different microprocessors but had many things in common. Not least, they were slow and short on memory.

The upshot of those limitations was that software had to be written in machine code, both for speed and because machine code programs take up less space than those in any other language. Secondly, and also for reasons of space, programmers learned to squeeze their programs into every available byte of memory.

Machine coders would spend hours in search of ways to reduce a section of code by a mere one or two bytes or a handful of clock cycles – savings of precious thou-

sandths of a second.

The second generation – the PC-compatibles, Atari STs and Commodore Amigas – feature much more powerful processors, and have large memories, typically between 512K and 2Mb of RAM. Not unnaturally, buyers of these machines expected life to be easier. All that memory looked like riches beyond dreams, and why learn machine code now when these superfast computers could turn in machine code performance from "easy" languages like C?

But that "machine code performance" was only when viewed in comparison to the older 8-bit computers. Programmers could only get away with the easy approach so long as the public was happy with 8-bit performance from their 16-bit computers. Of course, they weren't happy for long. And when the first genuine machine code programs for the new machines arrived, the game was up.

Especially in games. Programming teams like Argonaut and Realtime, with games like the *Stargliders* and *Carrier Command*, have begun to use the power of the new machines to create worlds in 3D, smoothly animated yet with lightning-fast action. The unimaginative conversions of old 8-bit product now look very humble indeed.

So in a sense, programmers are back where they started, squeezing their code to save time and memory. And when the day arrives that we all have the equivalent of a

Great expectations

Jez San
Amiga/ST • Starglider I & II

The original *Starglider* was one of the first programs to exploit the power of the 16-bit machines, and undoubtedly helped to sell a lot of Atari STs. And it's a measure of how far 16-bit programming has developed that *Starglider II* makes its predecessor look positively feeble.

After early work on the ST, Jez San switched to the Amiga, and now has to be considered one of the leading programmers on these two 16-bit superstars.

"Perhaps the fundamental thing is that people expect more out of the 16-bit machines and sometimes they aren't capable of delivering. For example, some of the 8-bit machines are much better at scrolling graphics.

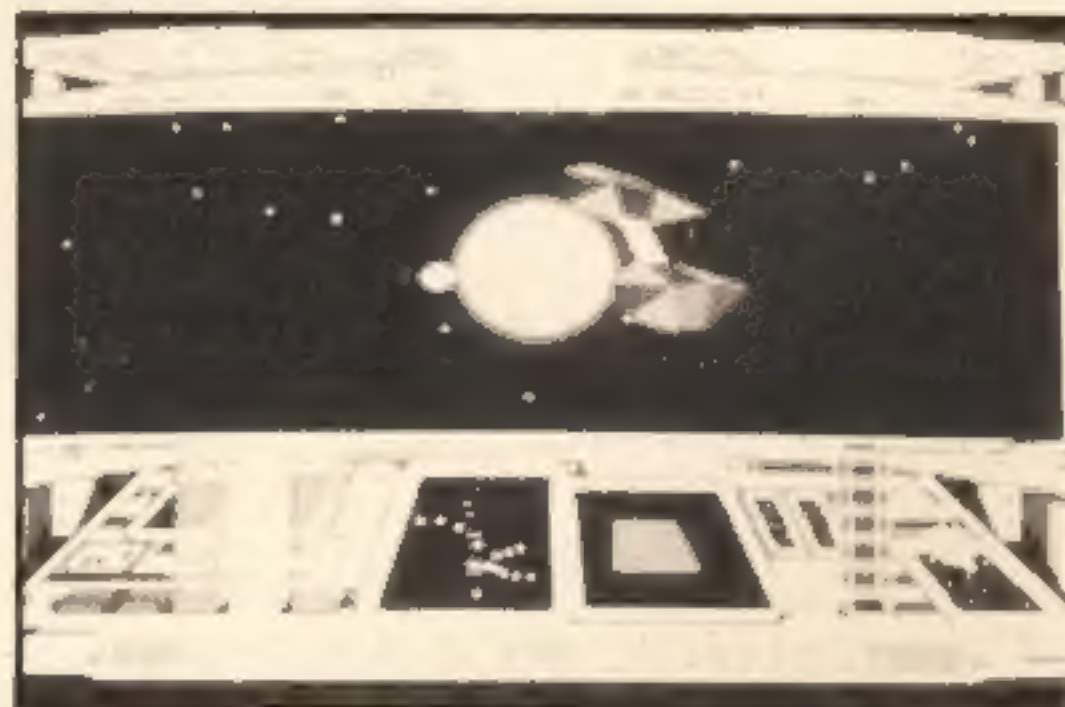
"Where the 16-bit systems do score is in the maths – with built-in multiply and divide instructions they are far better at 3D graphics, which is what we specialise in.

"There are problems with memory on the

new machines. While 64K on the 8-bit machines was plenty, 512K on 16-bit machines often isn't enough. Sound effects take up large amounts of memory – the soundtrack on *Starglider II* is about 450K. On good 16-bit games you're usually talking about 50K of code, 200K of graphics and 200K of sound but we could easily fill up more memory with graphics and sound.

"And things like expansion RAM on the Amiga, and machines like the ST 1040 and Mega STs don't help because you have to write for standard hardware, and that means 512K.

"What would be a help is faster access to peripherals. That is much more important



● Starglider II - "the soundtrack is about 450K"

Finding the right tools for the job ...

One thing all programmers have in common is the need for good development tools, and naturally the professionals want the best. A strong contender for that accolade must be one of the industry's best-kept secrets: PDS, the Programmer's Development System. Although extensively used by the major programmers, few outside the ranks of the professionals will have heard of it.

"There are now about 250 users of 8-bit PDS, and we've got about 20 beta testers of the 68000 system," says author, developer and publisher of PDS, Andrew Glaister.

That list of PDS users reads like a Who's Who of British programming: Telecomsoft, Virgin, Electronic Arts, Ultimate/Rare, Jez San, Realtime, and Archer MacLean are all PDS users. Among the programs developed using PDS are various versions of *Elite*, *Starglider*, *Star Wars* and *Empire Strikes Back*, *Tiger Road*, *Barbarian*, *Last Ninja* and *Afterburner*.

It is a combined hardware/software system running on an the PC. It comprises an interface board providing two ports, and

the software and manuals. In addition, you need an interface for the target machine. The system costs £500, and a further £50 for each machine interface.

Very expensive compared to a copy of Devpac, say, but Glaister says cheerfully, "It pays for itself after the first project because it can halve your development time."

The software includes a full assembler/disassembler for the target machine (either Z80 or 6502), memory monitor and a graphics editor. The 8-bit version is blisteringly fast: on a 386-based PC, it will assemble 1Mb of source code in about 2 seconds, and transfer of the object code varies according to the target machine but on a Spectrum it's about 20K per second.

Using PDS, you can write your Spectrum program in Z80 assembler (on the PC), design the graphics (also on the PC), then assemble, link, and download your program to the Spectrum. Now you can run your program while the PC acts as a monitor, allowing you to examine registers, set

breakpoints, and generally control execution of the program. If there are any problems, you can edit, reassemble and download again very quickly.

The advantage of PDS is that all your software tools are integrated into a single system, and controlling the target machine from a separate development system saves a lot of time since you're not having to switch constantly between development tools and the program under development. Both run simultaneously.

But why the PC? Andy Onions, of Realtime, makes the point: "Developing for the ST and Amiga is only practical with a hard disk, but they are very expensive on those machines – you're talking about £700. On the PC, you can get a hard disk with controller for about £175. All of the utility software you need is widely available for the PC, and it's all cheap. You also have a very reliable system."

And Glaister says, "Since we've had PDS on the PC we've had no complaints, and nobody's every questioned it. I love the PC – the new 386 machines are the most powerful computers available and VGA graphics allow you to develop for anything, even the Amiga."

Cray on our desktop, with gigabytes of memory and TV-quality graphics, you can expect one programmer to turn to another and say, "If we could just shave a few milliseconds off this routine..."

A BIT BAFFLED?

If you find talk of 8-bit and 16-bit systems confusing, have patience. Watch for a full explanation in Learning Curve, our guide for beginners, in the next few weeks.

than more memory – although 2Mb of RAM would be nice. But when we find a way of filling 2Mb we'd want more.

"Really fast disk drives would allow us to use disk space as virtual memory, and then your available memory becomes the capacity of the drive. Optical disks [with capacities of thousands of megabytes] look interesting in this respect."

San also dispels the myth of the the Amiga's specialist hardware for graphics. "The Amiga hardware is not really suited to 3D work. It's better for handling sprites and windows – incredibly useful for those sorts of things – but really you don't see much difference in ST and Amiga graphics. The good thing about the Amiga is that the hardware is completely standard. Blitters on STs are great, but because they're not there on all STs, they don't get used."

What about the PC? "One problem with the PC standard is that it isn't really a standard. For example, on *Starglider II*, we're forced to support five screen modes – CGA, EGA, VGA, Tandy and Hercules. But as the better graphics standards like EGA and VGA become more established we definitely expect the PC to become a major market."

The power of the PC

Chris Andrew
Freescape • PC

PC-compatibles are still considered a bit of a loser when it comes to games, but it can boast some outstanding examples, not least Incentive Software's *Freescape* series. The first instalments – *Driller* and *Dark Side* – were two of the best games ever on the PC and good enough to stand comparison with product on any machine.

Chris Andrew, of Incentive's software team Major Developments, talks about some of the differences in moving from 8-bit to 16-bit programming: "I like programming on the PC because it's so powerful."

"Moving from Z80 systems like the Spectrum and Amstrad to the PC wasn't very difficult. You do find this thing where Z80 programmers move to the 8086, and 6502 programmers go to the 68000 but I'm not sure why that's so. I find that any machine code language is quite easy – you just have to sit down and learn it."

The 8086 can be a bit of a pain because the memory is divided into 64K segments. You end up having to do your program in segments and then link them together, but you have to be very careful about where your segment pointers are pointing. In *Driller* we had a couple of obscure

bugs because of that."

Graphically, the PC is always looked down on because of its most common standard, the four-colour CGA mode, but the increasingly-common EGA – with 16 colours from a palette of 64 – is as good as most ST and Amiga displays, and the next standard, VGA, outperforms even the Amiga with 256,000 colours and a much higher resolution.



● PC Dark Side - "graphics get complicated when you move to EGA"

Andrew says, "Programming graphics gets complicated when you move to EGA because of the way the screen memory is mapped, but CGA is relatively easy. You just have to make the best of what you've got."

And he finds some of the PC's limitations comfortable to live with: "I don't like programming sound anyway, so I quite like the PC because it means I don't have to do very much."



MICROSNIPS

Dept. COMPUTER EXPRESS

37 SEAVIEW ROAD WALLASEY MERSEYSIDE L45 4QN

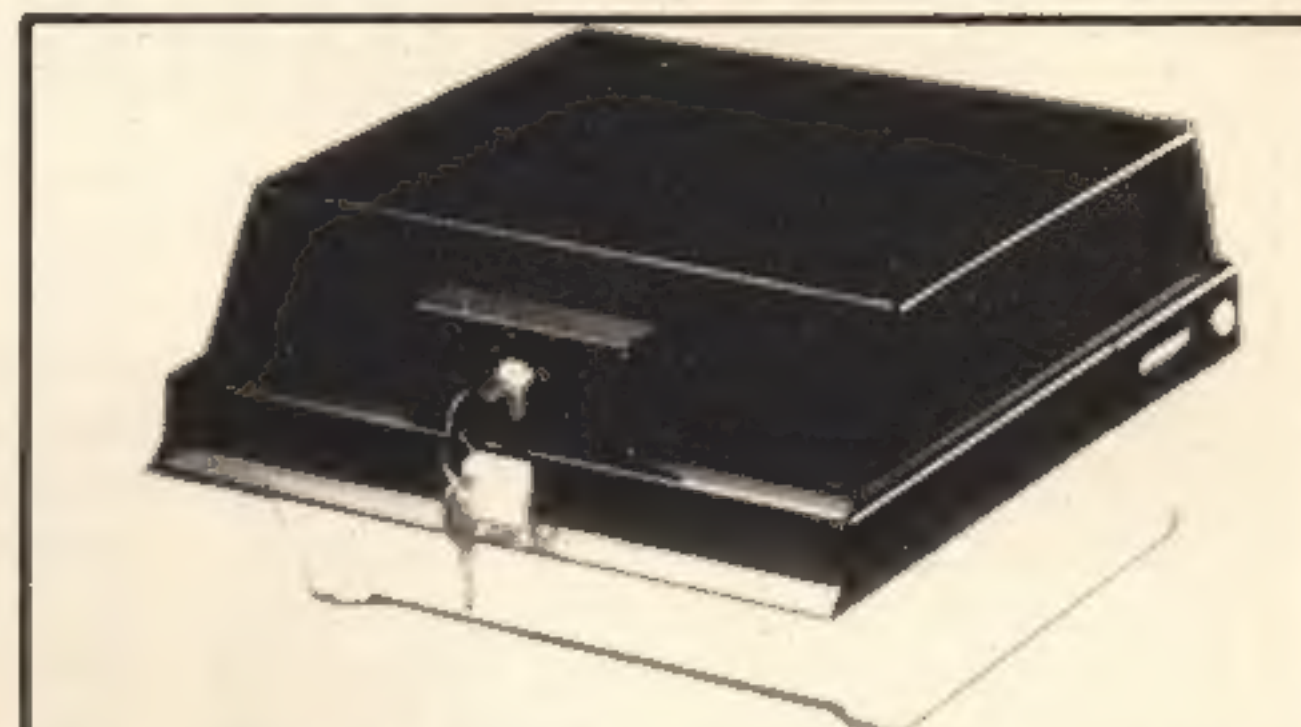
THE COMPUTER COMPANY THAT SHOWS YOU THE WAY

PRINTERS	
PANASONIC KX-P1081	£179.95
STAR LC-10 COLOUR	£269.95
STAR LC-10 MONO	£229.95
CITIZEN 1200 inc Interface	£149.95
DMP 2160 AMSTRAD +3 or CPC LEAD	£159.95
MP 135 DOT MATRIX	£145.00

COMPUTERS	
520 STFM/1Mb DRIVE WITH £450 WORTH OF SOFTWARE AND JOYSTICK	£399.95
AMIGA 500 + DISCS + MAT	£399.95
SPECTRUM PLUS inc SOFTWARE	£75.00
SINCLAIR +2 inc 10 games & Joystick	£139.95
PLUS FREE +2 Light Pen	

COMPUTERS	
PC1512/PC1640	BEST PRICES
*PCW8512	£559.00
*PCW8256	£389.00
* Both above include starter pack of discs & handbook paper	
AMSTRAD 464 inc colour including modulator, clock radio & desk	£399.95
AMSTRAD 6128 + 17 games + joystick + mono monitor	£299.95
COLOUR MONITOR VERSION	£399.95
AMSTRAD 6128, colour + modulator, clock radio & desk	£499.00
NEW AMSTRAD PC 2286 and PC2386 due in shortly	

MONITORS & LEADS	
PHILIPS 8833 COLOUR MONITOR	£259.95
UNBADGED 8833 monitor	£249.95
COMMODORE 1901C COLOUR	£199.95
ST/SCART LEAD	£11.95
ST/AMSTRAD COLOUR MONITOR	£9.95
SPEC 128/SCART (State Monitor)	£9.95
COMPUTER/TV LEAD	£1.99
MP1-AMSTRAD 464 MODULATOR	£14.95
MP2-AMS-6128	£29.95

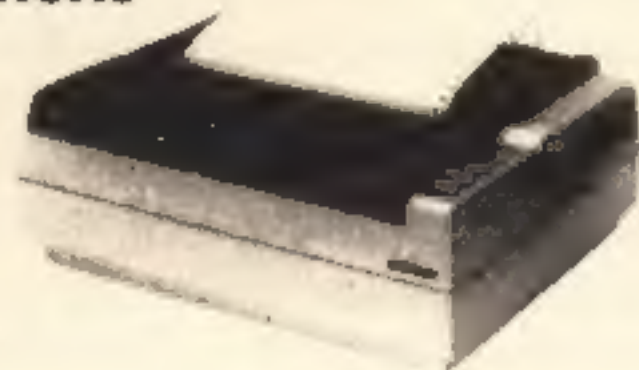


Lockable 3" / 3 1/2" Disc bank holds 40/80
* Anti-Static * High Impact * MRP £12.95

£7.95 or inc. 40—3" CF2 £75.80

SCOOP PURCHASE!

Siemens



FROM THE WORLD
LEADERS IN INK
JET PRINTERS
MRP £699.95
£449.95
SAVING £250.00

- **PT88E NEW MULTI-MODE INK JET PRINTER**
- EXCELLENT NLQ • DRAFT AND GRAPHICS ADDRESSABLE
- IBM GRAPHICS PRINTER, EPSON FX80/100 AND ASC11 (ECMA) COMPATIBILITY
- TRACTOR AND FRICTION FEED STANDARD
- CHOICE 8 CHARACTER PITCHES
- NORMAL PAPER • NEAR SILENCE
- 66-114CPS NLQ 200-343 CPS DRAFT

CANON PW-1080A PRINTER



• 160 CPS
• LOW NOISE
• TRACTOR FRICTION
MRP £339.95
£159.95

PHILIPS MEDIUM RESOLUTION MONITOR MRP £299.95

£249.95

8833
model

limited
stocks

Highly recommended
for AMIGA + ST

£7.95 MRP £19.95 or inc. 100 DSDD 5 1/4" discs £49.95

PERSONAL MULTI-FUNCTION STORAGE ANTI-STATIC

FEATURES:

- * Quality Diskette File for Safety & Convenience
- * Thickness all 3mm for lid and base
- * Smoked Colour of lid available with lock
- * Easy access handle for opening and carrying
- * Security storage for 120 pieces 5 1/4" Diskette
- * Also suitable for 24 pieces CD-Player Disc and 8 pieces 1/4" data cartridge
- * High impact plastic lid and base also through anti-static
- * Size: 32.8mm x 22.4mm x 15.5mm



CF-2

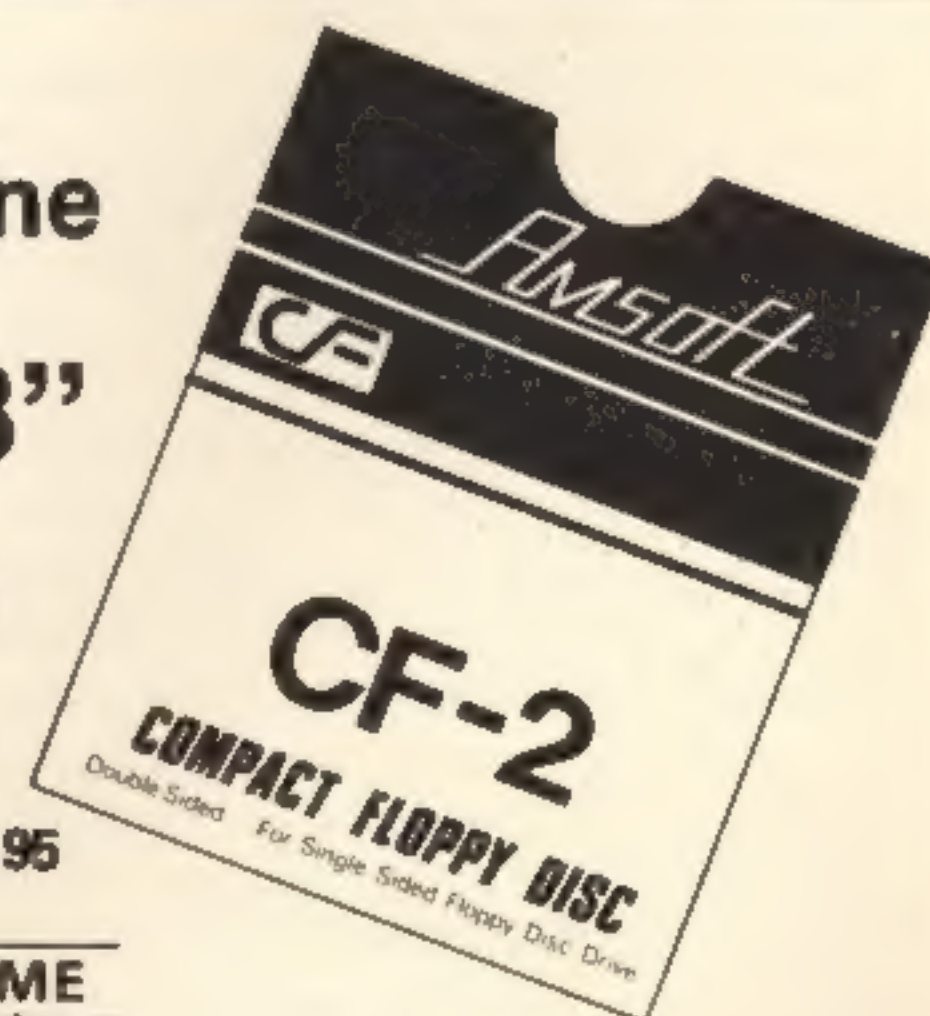
10 genuine

AMSOFT 3" CF-2 Discs

£18.95 MRP £29.95

TRADE ENQUIRIES WELCOME

"DISC" OVER MICROSNIPS ARE BEST!



REPAIRS AND SPARES

SPECTRUM ZX/SP+	£19.95
+2	£24.95
CBM 64	£35.00
ZX-MEMBRANES	£3.99
QL-MEMBRANE	£5.95
SPEC+/128 MEMBRANE	£8.95
SPEC KEYBOARD TEMPLATE	£3.99
CBM 64 PSU	£24.95
SPECTRUM 48 PSU	£9.95
128K PSU	£12.95

BACK-UP DEVICES

FREEZE MACHINE C64/128	£24.95
ATARI ST-FREEZE FRAME	£39.95
MULTIFACE 1 (SPEC)	£39.95
128	£44.95
MULTIFACE 3	£44.95
MULTIFACE 2 (AMS)+	£44.95
MULTIFACE (DISCIPLE) 128	£44.95

QUALITY COVERS

PC1512 MONITOR/SYSTEM COVER	£12.95
PC1512 KEYBOARD COVER	£6.95
SPEC+	£4.99
SPEC+/2+3	£5.99
ATARI ST FM	£7.95
AM	£7.95
AMIGA A500	£7.95

JOYSTICKS

CHEETAH 125+	£6.50
CHEETAH MACH 1+	£13.50
RAM DELTA	£9.50
QUICKSHOT II	£6.95
KONIX SPEEDKING	£10.95
KONIX NAVIGATOR	£14.99
MOONRAKER	£3.99
DATEX MICROBLASTER	£9.50
Similar to PRO-5000	
ST 4 Player Adaptor	£4.99

GRAPHIC DEVICES

DK-LIGHTPEN 464	£18.50
PCW KEMPSTON MOUSE (inc White Handman)	£84.50
AMX MOUSE (SPEC) inc ART	£64.50
AMX MOUSE/ART BBC	£64.50
KEMPSTON MOUSE inc ART STUDIO	£64.50
TROJAN LIGHTPEN (specify make)	£19.95
TROJAN PCW L/PEN	£29.95
TROJAN IBM L/PEN	£19.95

SOUND DEVICES

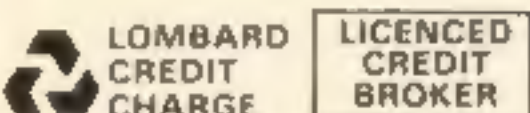
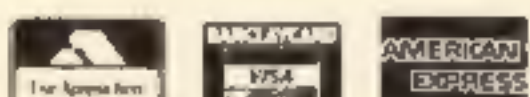
RAM MUSIC MACHINE SPEC or AMS* (*Disc add £7)	£47.50
AMDRUM digital drum for AMSTRAD	£29.95
SPECTRUM SOUND SAMPLER	£39.95
DM STEREO SPEECH AMS464/6128 (Tape)	£27.95
DK-STEREO SPEECH AMS464/6128 ROM	£37.50
DK-3 CHANNEL SOUND (spec)	£29.95
PRO-SOUND (ST. SOUND SAMPLER)	£51.95

DISK MEDIA

10 SONY 3 1/2" DSDD	£14.95
10 NASHUA 5 1/4" SSDD	£8.95
25 BULK DS 5 1/4"	£9.99
10 AMSOFT 3" CF2	£20.95
10 MAXWELL 3" CF2	£19.95
10 3M 5 1/4" DSDD	£9.95
DISK BOX—HOLDS 20 3 1/2"	£4.99
LOCKABLE BOX HOLDS 20 3"	£7.50
LOCKABLE BOX HOLDS 40 3 1/2"	£7.50
LOCKABLE BOX HOLDS 100 5 1/4"	£8.95



10 3M
5 1/4"
DSDD
MRP
£19.95
£8.95



MAIL ORDER
PRICES TO
PERSONAL
CALLERS
PRODUCING
ADVERT

Postage and Packing
Under £50 add £2.00 Under £100 add £5.00
Over £100 add £10 Courier Delivery
Europe — Full price shown covers
carriage. Non-European add 5%.
Visa Mastercard Postglo
International accepted
NOT Postbank Postcheque

**WE ACCEPT
AMERICAN EXPRESS
VOUCHERS**

FREE
SOFTWARE & ACCESSORIES
LIST WITH FIRST ORDER
PROBABLY THE LARGEST RANGE OF
COMPUTER PRODUCTS ANYWHERE

051-630 3013
24 Hr. CUSTOMER ENQUIRIES
051-691 2008 MAIL ORDER
051-630 5396 ACCOUNTS
051-639 2714 FAX NUMBER

"Although we're moving away from all-text stories, everything you've come to know and love about interactive fiction will still be there. We are not compromising on quality, richness or depth in any way. What we are doing is enhancing these features with graphics that exhibit the same attention to quality and detail as our prose. A new technology is here and we're making full use of it."

Infocom statement of intent

Infocom goes graphic

'A THOUSAND WORDS IS WORTH A PICTURE' MIGHT HAVE BEEN INFOCOM'S MOTTO, BUT NOW THE MASTERS OF ADVENTURE SAY YOU CAN HAVE BOTH. IS THIS HERESY? A SULLEN BOW TO PUBLIC DEMAND? OR THE DAWN OF A NEW ERA? PETER WORLOCK INVESTIGATES ...

Infocom, the one-time masters of computer adventure, have not had a great 12 months. Pressured from all sides by the public demand for graphics, and the increasing popularity of animated role-playing games, the US company looked less and less confident as the year wore on.

Whereas Infocom games used to be rare events, inevitably greeted by critical acclaim and public clamour, the last half-dozen releases came thick and fast. Some fans felt that the quality had declined as productivity had risen, others that the quality was as high as ever but no longer quite good enough. And there was an air of desperation about some moves like the ill-advised (and, in this country, never-to-be-seen) InfoComics with their meagre storylines and laughable graphics.

Other developments, including the role-playing and self-mapping features of *Beyond Zork* received a lukewarm "thumbs up", but failed to recapture the excitement of old.

Now the company is poised to enter a new phase, with a range of products that it hopes will give the ailing old-timer a new lease of life. The new games have one thing in common: graphics.

Most radical of the new games is *BattleTech*

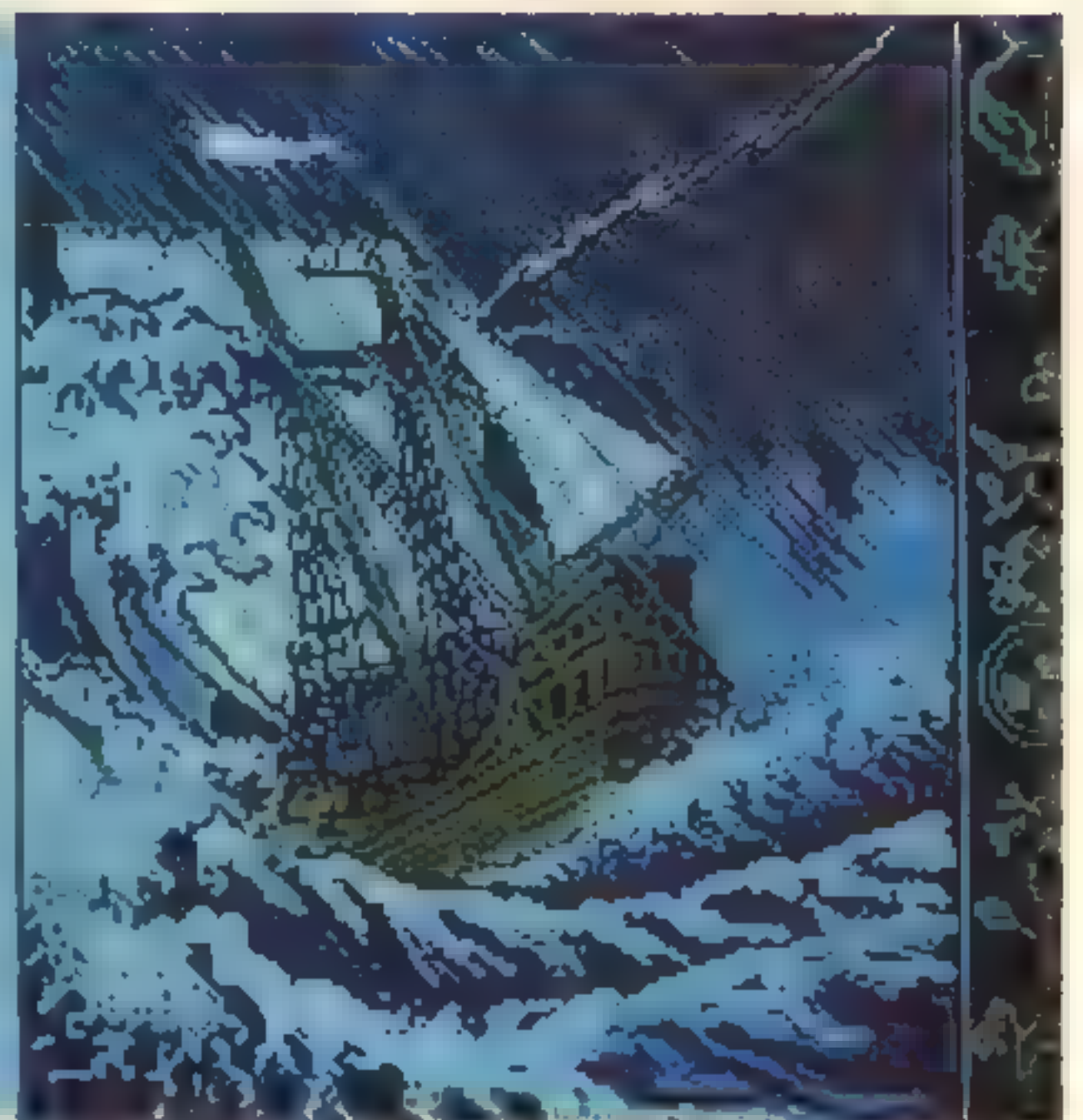
The gale tears at you, biting deep within, and you know that if you don't make landfall soon you'll all be dead. You are John Blackthorne, Pilot-Major of a dead fleet, one ship left out of five, eight and twenty men out of one hundred and seven, and only ten of those can walk. No food, almost no water, and that brackish and foul.

Bridge of the Erasmus
This is the bridge of the Erasmus, a Dutch merchant and privateer. The unlash wheel is directly forward of you, a sea chair is lashed to the back of the wheel, and the ship's bell is hanging here. Spray blows past in an angry torrent.

The wheel dominates the quarterdeck. It is turned straight and free to turn now.

The ship heels in a sudden squall, throwing you from your post at the wheel, which, uncontrolled, begins to turn to port.

STRAIGHTEN THE WHEEL



● Shogun - lots of fighting and a bit of love interest!

(see below), Infocom's first real role-playing game, but the RPG theme carries forward into other products, notably *Journey*, which Infocom says is "a whole new realm of entertainment software" called role-play chronicles (the company hasn't yet lost it's yen for slightly pretentious marketing).

Hardened readers will recognise little new in the story line: Tag, Praxix, Bergon, Esher and Minar head off on a quest for the "revered wisdom of the great wizard Astrix", exploring unknown lands and underground caves, and solving puzzles.

Written by *Zork* co-author Marc Blank, *Journey* is a more-or-less straight merging of the tradition-

al Infocom text adventure with elements of role-playing games. The graphics in the game, in the form of Magnetic Scrolls' illustrations rather than the animated views of games like *The Bard's Tale* and *DungeonMaster*, look excellent, but the most that can be said at this stage is that if it works it should be great, "but the *Journey*, Grasshopper, is fraught with danger".

Much closer to the traditional adventure format is *Shogun*, written by second *Zork* co-author Dave Lebling. This is the second game license of James Clavell's best-seller (Virgin produced an arcade-adventure of the book a couple of years ago), and the story will be familiar to anyone who has read the book, watched the TV mini-series, rented the



Role-reversal

As if the switch to graphics wasn't shocking enough, heading up the list of forthcoming releases is Infocom's first non-adventure game. The officially licensed version of FASA's *BattleTech* system is a true computer role-playing game in which you play Battle-Mech rookie Jason Youngblood. Your aim is to survive long enough to save the universe from the deadly Kurita warriors.

On paper, at least, the new game will set any RPG fan's fingers twitching: four million locations, animated graphics in projected 3D style, together with masses of combat and the standard RPG features of developing characters and the ability to acquire new skills and equipment.

Infocom claims it will also boast a number of innovations, including the unlikely-sounding "emotive out-take". At various points in the game, the screen zooms in to show the emotional reactions of characters to various happenings.

Could this be the first three-Kleenex computer game?

video or played the Virgin game.

The game promises to have you "matching wits with tyrannical Japanese aristocrats and fighting off attacks by Ninja assassins", with a bit of love interest thrown in for good measure.

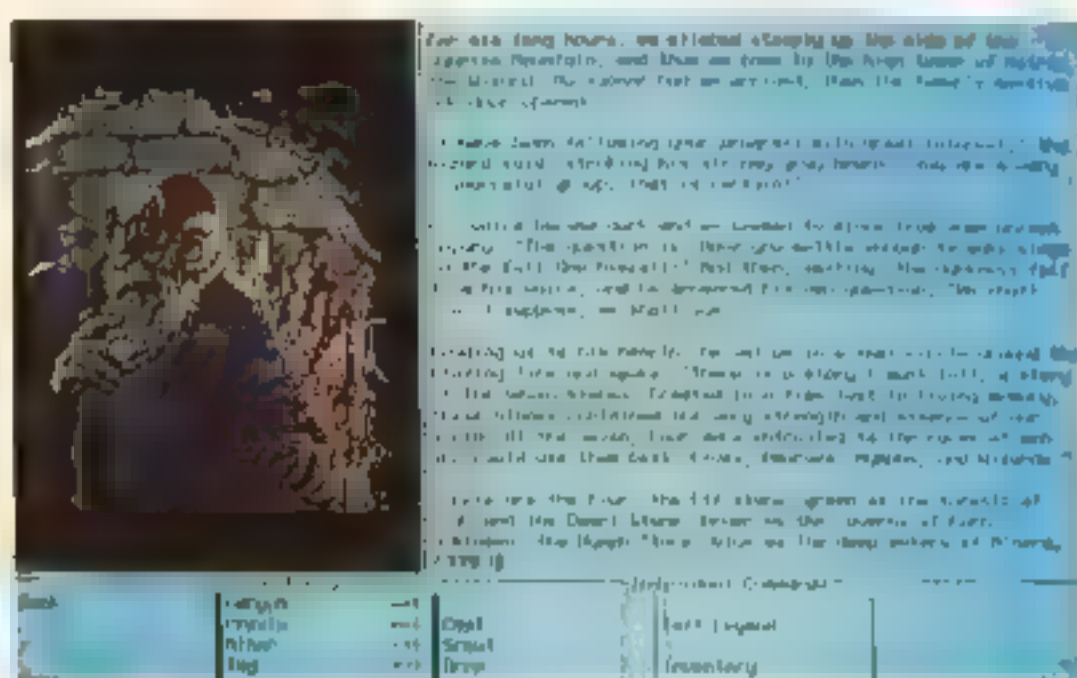
Again, there are illustrations, this time in "traditional 16th century Japanese style", and Mediagenic claims these are "the most outstanding that Infocom has created to date". It would be churlish to point out that this is no great recommendation, and, in fact, the

And on the question of churlish, one hesitates to comment upon the fourth item on the menu: *Zork Zero*. In temporal terms, Infocom calls this the prequel to the *Zork* Trilogy, but in gaming terms it's a development of the *Beyond Zork* late-comer.

Naturally, the action takes place in Quendor and promises to explain many of the questions that have intrigued *Zorkers* for years, such as where did grues come from?

Written by Steve "Leather Goddesses" Meretzky, *Zork Zero* is a text-and-puzzles adventure of the old school, but again Infocom has felt obliged to bolt on a few bells and whistles. There is the self-mapping feature of *Beyond Zork* and a new parser, but also the iffy idea of little graphical puzzles such as Peggleboz, the Tower of Bozbar and Double Fanucci.

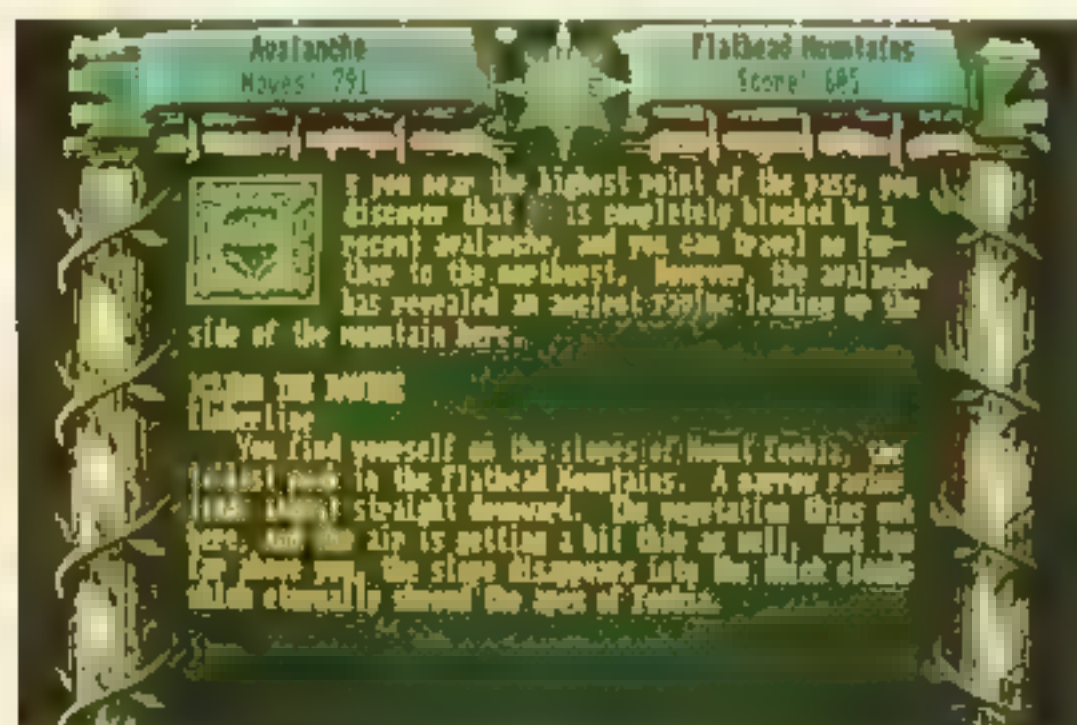
Cynical readers may imagine they hear the dis-



● Journey - a touch of the Tolkeins

tant sound of a near-dead horse being flogged, which might be taking things a bit far. But *Zork Zero* does smack of the Hollywood syndrome: if in doubt, remake an oldie. What can we expect next: *Son of Zork*? *Rambo Hills Cop Academy XII goes to Zork*? Digging so deep into its past doesn't bode well for a company struggling to find its way into the future.

Zork Zero apart, however, the new line-up looks like a bold attempt to carry Infocom into a new era, while *BattleTech* is a radical departure and certainly the most exciting prospect. The merging of Infocom's classy adventures with a first-class RPG and combat system could take the games market by storm.



● Zork Zero - going back to mah roots...

Release Schedule

	PC	ST	Amiga	C128	C64
<i>Zork Zero</i>	02/89	03/89	03/89	04/89	n/a
<i>Journey</i>	02/89	03/89	03/89	05/89	n/a
<i>Shogun</i>	01/89	03/89	03/89	06/89	n/a
<i>BattleTech</i>	11/88	06/89	n/a	n/a	02/89

INCREDIBLE SHRINKING SPHERE

MEDIAGENIC

The marvellous marble madness of Mediagenic's latest strategic shoot-em-up looks set to score in the speed and reflex departments. As a recruit with the Sphere Training Corps your mission is to negotiate the deadly maze of the Sangfalmadore Run and rescue one of your superiors.

Featuring assassin spheres, traps and prison squares in amongst its eight multi-directional scrolling levels, *Incredible Shrinking Sphere* rates pretty high with its graphics and sound FX too.

● Screenshot from the ST version.

● Also due out on the Amiga, Spectrum, CPC & C64.

SUPERMAN

TYNESOFT

Marvel Comics' second superhero makes it onto the silicon strips in an shoot-em-up designed around 15 pages of comic action. Icon-driven captions allow you to control him through 12 missions featuring the canon-throwing Parademons as he attempts to save shuttles and satellites with super strength, super breath, super hearing, and super vision. Super eh?

● Screenshot from the ST version.

● Also due out on Amiga, PC, Spectrum, CPC & C64.

THE CHAMP

LINEL

Box your way from the brawling back-streets to the centre-stage Champion of the World in this one or two-player strategic punch out featuring massive sprites shifting through 15000 frames of animation. You have 11 different offensive/defensive moves as well as clinches and illegal manoeuvres with which to defeat the boxing world's finest. Slo-mo replays will show your last moments while the theme tune from *Rocky* accompanies your long haul to the top.

● Screenshot from the Amiga version.

● Also due out on the ST & C64.

RETURN OF THE JEDI

DOMARK

Following on from *Star Wars* and *Empire Strikes Back*, but marking a departure from their wire-frame graphics, comes the final release of the trilogy where you're up against the Imperial Deathstar. Fly speederbikes, Scout Walkers and Millennium Falcons as you evade Imperial Stormtroopers, Tie Fighters and Cruisers in your attempt to take out the Death Star and escape before it takes you with it too.

● Screenshot from the Spectrum version.

● Also due out on the ST, Amiga, CPC & C64.

GRAND PRIX CIRCUIT

ACCOLADE

Drive a Formula One racer around 8 international circuits after choosing from three car configurations. You select the best design for each specific track and race against 11 other drivers with varying styles. Pit stops and tyre changes add to the realism, as do tunnel sequences where you're driving blind.

● Screenshot from the PC version.

● Also due out on the C64.

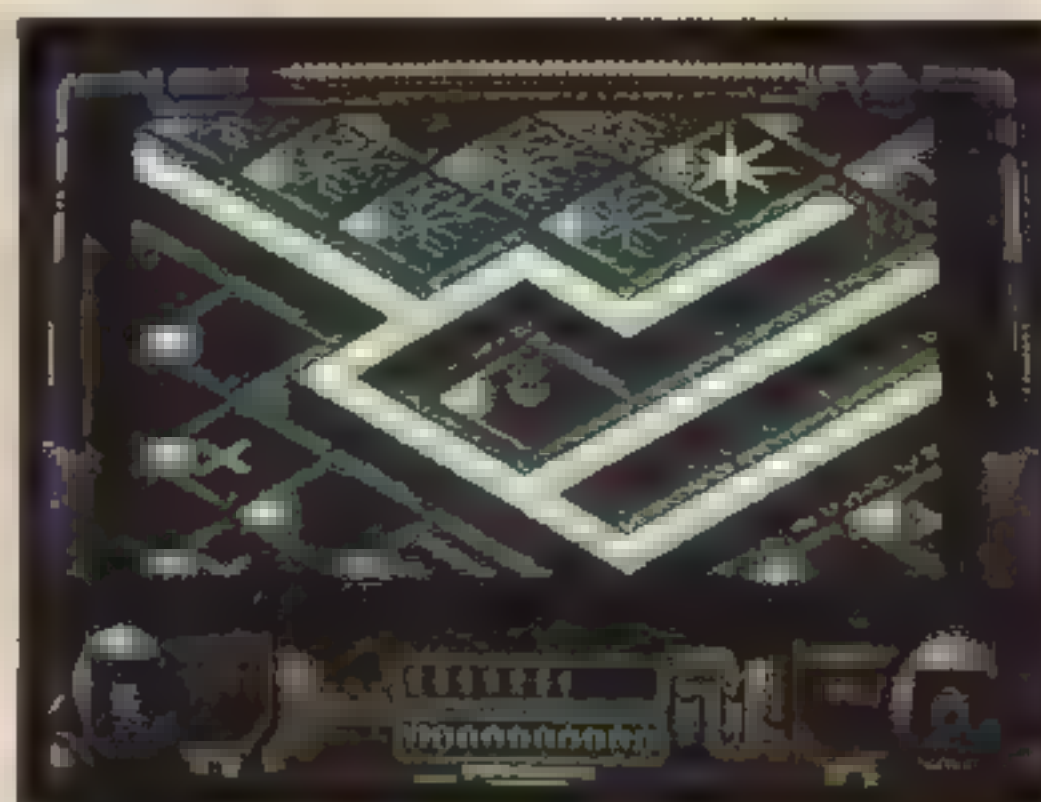
NEUROMANCER

ACCOLADE

Based on the novel by Bill Gibson which won just about every Sci-Fi award possible, comes *Cyberpunk* atmosphere and a fully-digitised sound track by Devo to set you in a 21st century Japan of hi-tech urban decay. You use your skills as a hacker to break into heavily protected government and corporate databases by cracking Cyberspace; the universal data network, the aim being to amass as much hardware and software as possible.

● Screenshot from the C64 version.

● Also due out on the PC.



Easy PCs

MS-DOS MAY BE THE MOST WIDELY USED OPERATING SYSTEM IN THE WORLD – BUT NO-ONE SAID IT WAS GOING TO BE EASY. PETER WORLOCK LOOKS AT THREE PACKAGES THAT SHOULD EASE THE PAIN.

"User-friendly" has been one of the most popular concepts in computing for the past few years. Unfortunately, MS-DOS pre-dates that popularity by quite a margin. Not to put too fine a point on it, MS-DOS can be downright hostile with its cryptic command syntax and odd abbreviations.

No surprise, then, that WIMP (Windows, Icons, Menus, Pointer) environments like Windows and GEM have become popular for the PC. Unfortunately, these front-ends have their own problems; specifically, they consume a lot of disk space, making them practical only on hard disk machines, and they take a while to load every time you turn on your PC.

A better bet are compromise systems that provide easy-to-use menus without going all the way into extensive graphic displays. Two of the better-known such systems are the Norton Commander, and Tree86, and both have just been upgraded and enhanced.

THE NORTON COMMANDER

Peter Norton Computing • £59.80 inc VAT

Peter Norton is probably better known for the Norton Utilities, but Commander has long been the leading DOS front-end system for PCs. Now in version 2.0, it offers pull-down menus, improved file browsing, and support for EGA and VGA displays, as well as being generally faster and more functional.

Installation is simplicity itself: copy all the files to a working disk, and then enter NC, or adjust your AUTOEXEC.BAT file. Commander loads into its basic screen which consists of one or two disk directory windows.

From here, you can perform most DOS functions, such as copying, renaming and deleting files either by use of the drop-down menus, or from the function key pad. Commander can be mouse-driven, or you can use the PC's cursor cluster to emulate mouse control, or you can use the keyboard shortcuts provided.

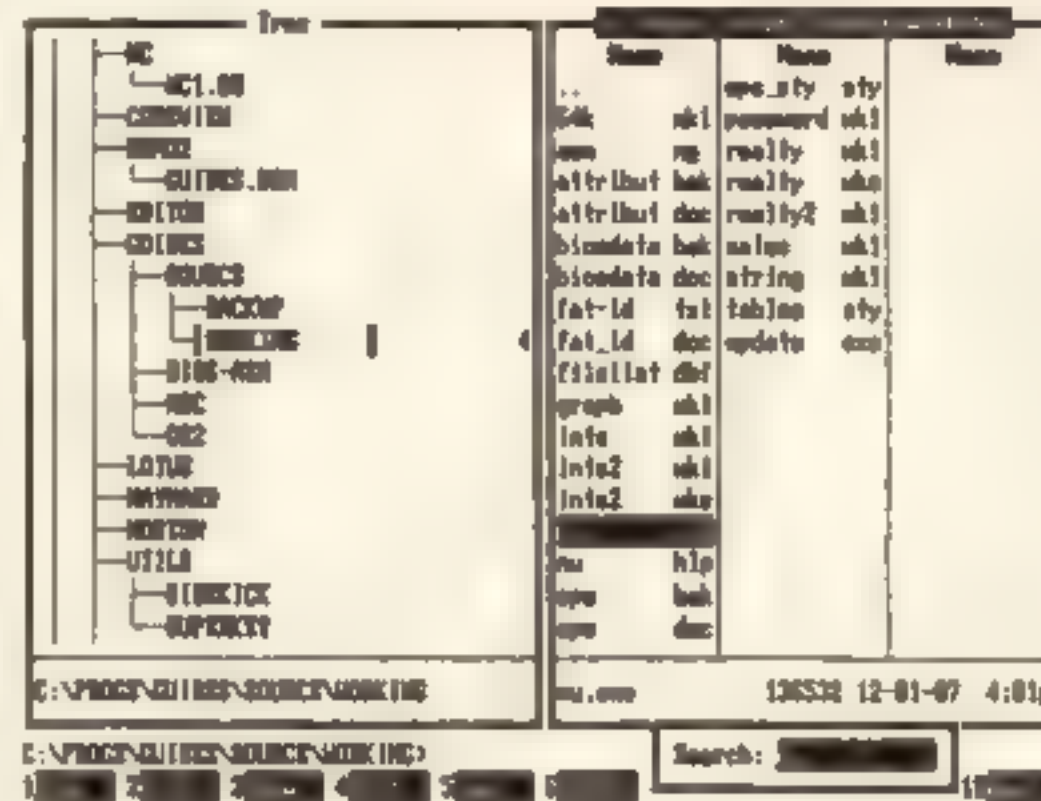
Having twin directories makes Commander particularly enjoyable to use, since you see both the

origin and target disks. Further, you can mark multiple files for copying and deleting in a single action – much easier and safer than using the DOS wildcard facility.

This is fine so far as it goes, but Commander goes much further. For example, the file browsing utility is more useful than DOS's TYPE command since it allows you to scroll forward and back through the file. Moreover, Commander has special options for viewing dBase and Lotus spreadsheet files.

Actually editing your files is also easier because Commander provides a text editor. You can use your own favourite but Commander's is more than adequate for quick changes to existing files, or for creating batch files and the like.

Finally, Commander gives you the ability to create a custom menu from which you can launch your most-used applications with a single key-press. The icing on the cake is the added bonus of tying documents to their applications and launch-



ing those from the directory screens. For example, if you have a document file LETTER.DOC created in Wordstar, Commander lets you choose LETTER.DOC from the directory, and when you hit RETURN the PC loads Wordstar and LETTER.DOC ready for editing.

The documentation is a model of clarity, clearly written, well-designed and with copious use of sample screens from the program. In addition, there's a quick guide which is basically a pictorial reference to Commander – rather superfluous but where documentation is concerned, better too much than too little, I suppose.

TREE86

The Aldridge Company • £45.90 inc VAT

Tree86, from the lesser-known David Aldridge, sets out to do what Commander does – to provide an easier, menu-driven front-end to DOS. Unfortunately, it doesn't succeed nearly as well.

As its name suggests, the program shows disk directories in the form of a tree, tracing the branch-like structure of sub-directories and files. This clearly shows the structure of your directories, but it can be wasteful of space, and the result is that Tree86 can display only one directory at a time, as opposed to Commander's two (Commander provides the tree display as an option).

The shortage of space is exacerbated by the fact that Tree86 devotes about a quarter of the screen to a permanent display of disk and machine status. Although it is occasionally useful to know the free space on the disk, the numbers and kinds of files, and how much memory you have available in the PC, you certainly don't need the information all the time. With Tree86, you have no choice.

The program is designed to be used with a mouse; if you don't have one available, you're reduced to using some fairly cryptic single-key commands, which isn't as satisfactory as Commander's cursor-key alternative.

In addition to the usual DOS commands to copy, rename and delete files, Tree86 adds little more. There is a file-browser but this is barely more functional than TYPE (you can't scroll backwards), although it does allow you to switch between ASCII and hex displays. Finally, you can run PC applications from within the program but, again, in more limited fashion than Commander provides. For example, Tree86 provides no editor, you have to bring your own, and while it can automatically load a document, you have to allow for this by amending a batch file outside of Tree86 – not a task to endear the package to PC novices.

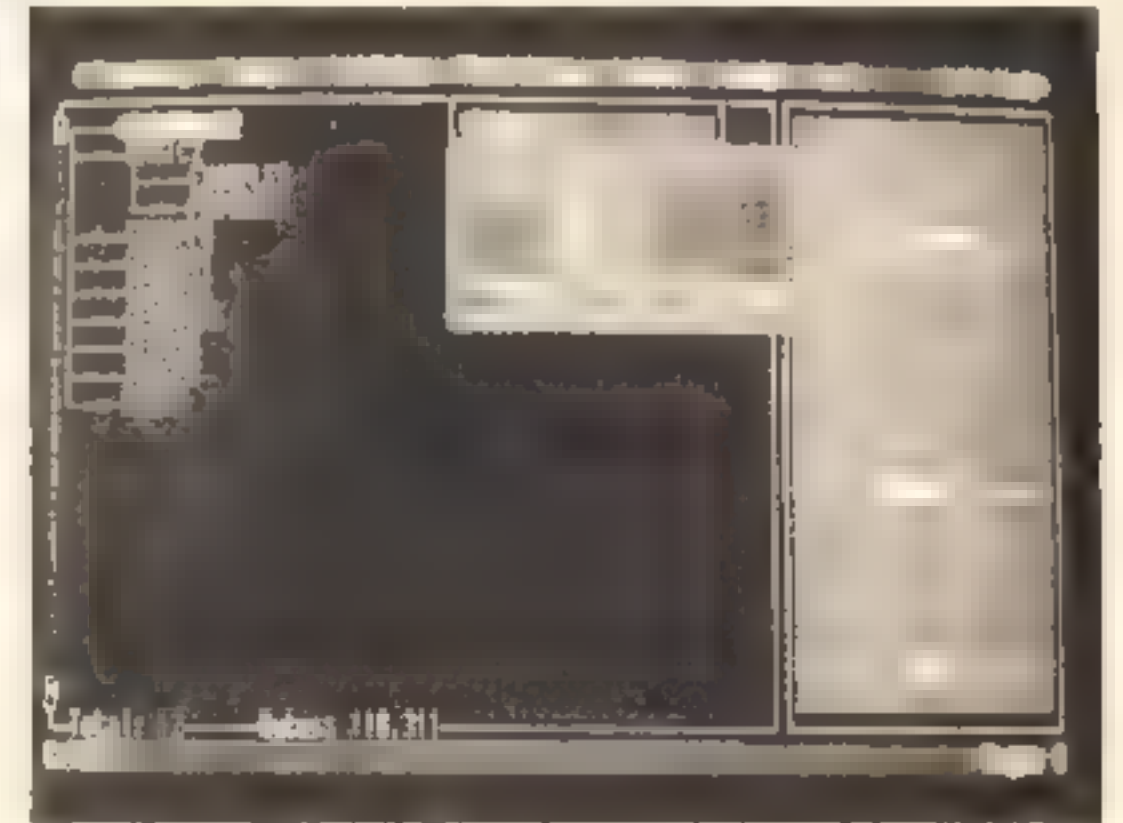
Mr Aldridge's package generally has an unfinished feel to it, an impression only reinforced by the manual which provides only the briefest coverage of Tree86's features.

Verdict

In this two-sided contest, Commander must be considered an outright winner. Professionally presented, and with a host of extra features, it leaves Tree86 for dead.

It can be highly recommended for beginners struggling to come to terms with DOS, and Commander might find a particularly warm welcome in offices where it should allow occasional users of company PCs to get to grips with the machines a lot more quickly and easily.

However, once you're beyond the beginner's stage, there isn't really much reason to look at something like Commander. A better bet would be a DOS management program like PC Tools Deluxe which provides all the facilities (except mouse control) of both Commander and the Norton Utilities in one powerful package.



HELPME

California Software Products Inc. • £79 inc VAT

Perhaps the single biggest advantage of the PC system is its flexibility. Video displays, memory capacity and disk storage are all customisable, and the vast library of MS-DOS software is unparalleled. You can literally turn a PC into the kind of computer you want.

However, that flexibility also provides limitless opportunities for conflicts and incompatibilities in

hardware and software, and problems like that can be exceedingly difficult to fathom. Which makes a good case for HelpMe, one of a new batch of utility programs from CSPI.

HelpMe is the disk-based equivalent of having a PC technician at your beck and call, providing more than 300 diagnostic tests for PC hardware and software. Uses range from helping a novice set up MS-DOS by automatically configuring CONFIG.SYS and AUTOEXEC.BAT files, through to highly technical analysis of the hardware status without the need to remove the

PC's cover and dig around inside.

In fact, if there's anything you want to know about the set-up of your PC, HelpMe can probably tell you. Want to know the state of file-fragmentation on your hard disk? No problem. Easy. How about a list of interrupt requests and their memory locations? Child's play.

Naturally, the key question is, how often do you need to know these things? For corporate DP managers the answer is probably, the time. For the computer enthusiast with a PC at home the answer is probably, hardly ever.

But HelpMe is a bit like insurance. When everything's going fine you'll resent the premiums, but when you need it, it's worth almost any price. Imagine lugging your PC all the way into a repair shop, only to find that HelpMe could have told you your new display card was the cause of the problem!

It's easy to install and use, and seems to work well (hard to say – there's nothing wrong with my PC, he said smugly). Casual PC users could probably live without it, but if you absolutely have to have working PCs, you should have HelpMe.

In the Beginning...

BUYING YOUR FIRST COMPUTER CAN BE A DAUNTING EXPERIENCE. CHANCES ARE, YOU'RE NOT SURE WHAT IT CAN DO, AND TO CAP IT ALL, ONCE YOU'VE BOUGHT YOUR MACHINE, YOU FIND YOUR PROBLEMS ARE ONLY JUST BEGINNING. YOU NEED THE EXPRESS GUIDE TO LIVING WITH A COMPUTER. WEEK BY WEEK, PETER WORLOCK EXPLAINS THE CONCEPTS AND THE JARGON.

When I first became interested in microcomputers – in the days of the UK101, Nascom, Pet, Apple II, and the amazing Exidy Sorcerer (the Amiga of its day) – I was an impoverished junior reporter on a small weekly newspaper. Owning one of these magnificent machines was only a dream, but I

bought all the computer magazines (all three of them) every month, barely understanding a tenth of what I was reading and learning more from the adverts than I did from the articles.

When the dream came true and I finally bought my first computer, I at least understood most of the jargon and had a fair idea of what I could do with the machine.

For most people today, a two-year wait for a computer is unlikely and unnecessary, but it means that many first-time buyers get their computers home without knowing the first thing about them. Assembling the various bits is usually easy, but as soon as you turn on the machine you're lost.

Don't panic.

The first problem for many beginners is understanding the difference between hardware and software. So...

Hardware is the stuff that hurts if you drop it on your fingers. Your computer will consist of one or more bits of hardware: an Amstrad PC, for example, has the system unit, the keyboard, and the monitor; older machines like the Spectrum and Commodore 64 have the system unit and keyboard combined into a single box.

The system unit is the 'brain' of the computer, the bit that does all the work. The other pieces of hardware, including the monitor, printers, disk drives, and so on, are usually referred to as 'peripherals', simply because they're peripheral to the system unit.

Peripherals are necessary for reasons that are

obvious when you think about it. You need devices like keyboards (and joysticks and mice) to communicate with the computer: issuing commands, and providing information for it to work with. The computer needs devices like monitors and printers to communicate with you.

Software is the stuff that makes computers work, and software equals programs. Programs are simply lists of instructions which tell the computer how to perform a certain task (cooking recipes, instructions for building model airplanes, and knitting patterns are all examples of programs for people). Without a program, the computer is unable to do anything.

Most software is external to the machine and comes on tape or disk – games, graphics programs, word processors etc. are all supplied in this way. These kinds of programs are usually called applications.

However, it is apparent that some programs must be built in to the computer, otherwise it would be unable to read the application programs from the tape or disk, so all computers have more or less of this built-in software. Machines like the ST, Amiga, Amstrad PCW, and PC-compatibles only have a minimal amount of this software,

enough to be able to read and execute other programs from the disk drive, particularly a special program called the operating system. Older machines like the Spectrum, Commodore 64, and

BBC Micro have much more built-in software, including entire versions of the Basic programming language, and the operating system.

The operating system provides a general set of housekeeping programs which tell the computer how to read the keyboard, how to display information on the monitor, and how to store data on disk or tape. To do anything more complex – in other words, to

do the things you bought the computer for – you must acquire a specialist program and load it into the machine.

For now, it's enough to understand these differences: hardware is the physical stuff,

software is programs, and programs come

in two different kinds: operating systems, which the computer needs before it can do anything at all, and applications programs, which the computer needs before it can do anything useful.

We'll talk about these and other topics in more detail in future articles.



● Getting your computer home is only the start of your problems.

Technobabble

The subject of memory is one of the more jargon-ridden areas of computing, and nothing marks you down as a novice more than using the jargon incorrectly. Saying things like, "My computer has a lot of K," when you mean it has a large memory is like saying, "My car has a lot of MPH" when you mean it's quite fast. Sure to set the experts sniggering!

Computer memory comes in two kinds, RAM and ROM. ROM is non-volatile – its contents are perma-

nently fixed and turning off the computer's power has no effect on it. For this reason, ROM is used to hold the computer's built-in software. But it also means that the contents are unchangeable – obviously no use for temporary information and programs that you don't want permanently in the machine.

RAM is the temporary workspace where the computer holds programs and the information it is working on. RAM needs a constant

flow of electric current to work, so when you switch off the power, RAM is wiped clean.

The basic unit of memory is the byte, a group of eight binary digits, or bits. The kilobyte, usually shortened to K, is 1,024 bytes, not 1,000 bytes, so a computer that has 512K of memory has 524,288 bytes of RAM. A megabyte is 1,024 kilobytes, so that the 512K computer has half a megabyte of RAM.

TIME TO TALK

The PLUS D

£52.13

15% VAT = £59.95

MGT's premier product. The disc interface that snapshots all your cassette software to disc in seconds. The printer interface that prints out ANY screen. Simple enough for a beginner, yet state of the art for the expert user. With all the Sinclair Interface 1 facilities and commands, the PLUS D will transform your 48K, 128K or + 2 Spectrum.



DISC DRIVES



3.5", 5.25", single or dual, for Spectrum, QL, BBC, Atari, PC - you name it, we sell it! Because you're buying direct from the manufacturer, you won't find better drives at a better price! Each drive has a built-in power supply and connection cable.

DISC DRIVE	EX-VAT	VAT INCL
3.5" Single drive	£ 86.91	£ 99.95
3.5" Dual drive	£165.17	£189.95
5.25" Single drive	£130.39	£149.95
5.25" Dual drive	£217.35	£249.95
3.5" ■ 5.25" Multi	£199.96	£229.95

Hobbyists! Call for prices on bare drives!

SUPER SAVER PACKAGE

£121.70

15% VAT = £139.95

The PLUS D and 3.5" DSDD Drive. All you need to turn your Spectrum into a powerful, modern disc-based computer! Load 48K in 3.5 Seconds and 128K in just 10 seconds "Best Buy" ... Your Sinclair. "Another Amstrad Crusher" ... Crash.

THE TWO FACE

£14.74

15% VAT = £16.95



Another winner from MGT. A two-way connector with a switch that lets even incompatible interfaces work together! The TwoFace also has a built-in joystick interface. Opus/Beta/Microdrive users can now transfer all files to PLUS D. The ultimate in Spectrum gadgetry!

MGT DIRECT

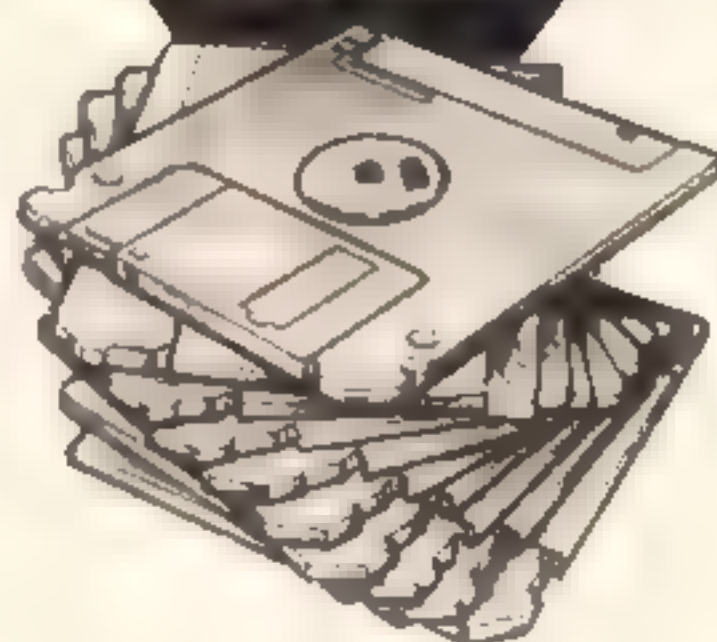
It's time to talk about quality of service. Lots of companies are advertising lots of products at excellent prices. But we believe that our customers deserve more than that. We believe that you have the right to demand an honest, in-depth appraisal of a product's strengths and weaknesses before you buy. We believe you should get a description in terms that you can understand and perhaps an expert comparison with rival products. And if you decide to buy, you need to be assured of first-class service afterwards. Not just if a product is faulty, but also if you need help in installation or if you simply come up against a problem that stumps you.

At MGT we've got the time to talk to you. We only sell products that we like and use ourselves. We understand what we sell, and every one of our sales team is trained to help you, whether before you buy or after. And even if we don't know the answer to your question, or if we don't stock the product you're looking for, we'll find out about it for you.

And the time to talk can be almost any time. Our phone lines are open till 7p.m. Monday to Friday in case you want to call us after work - even after that, there's an answer-phone. Just leave a message and we'll call you back.

It's time to talk to MGT first!

MGT BRAND 3.5" DSDD DISCS



MGT Name - MGT quality, with a lifetime guarantee! Sold individually or in plastic boxes of 10 with labels.

	Ex-Vat	W/Vat
1 Disc	£ 1.47	£ 1.69
10 Discs	£13.00	£14.95
20 Discs	£24.30	£27.95
30 Discs	£33.00	£37.95

CARDEX DESK TOP PUBLISHING

£32.87

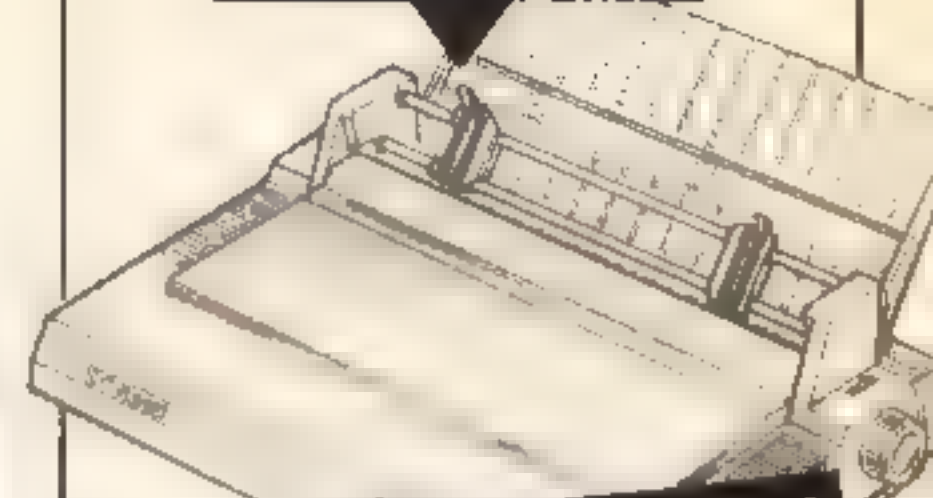
15% VAT = £37.80

Finally, real DTP for the Spectrum! A word processor, graphics and page layout designer all in one and supplied on disc. "Worth every nickel you'll pay for them" ... Your Sinclair.

PRINTERS

from £130.39

15% VAT = £149.95



THIS YEAR'S CHRISTMAS PRESENT

Printers to suit every pocket and every computer - from 9-pin to laser printers, normal or wide carriage. Free connection cable with every printer sold.

The Star LC10 in mono or colour with paper-park and font-select buttons.

The Citizen 120D - sold to 70% of UK schools. The new 180E - faster printing, font select, 2 year guarantee.

Typical prices (inc. VAT)

Star LC-10	£239.95
Star LC-10 Colour	£269.95
Citizen 120D	£149.95
Citizen 180E NEW	£199.95
Citizen MSP 15E (wide carriage)	£299.00
Citizen HQP 40 (24-pin)	£499.00
Citizen Overture 110+	£1499.00

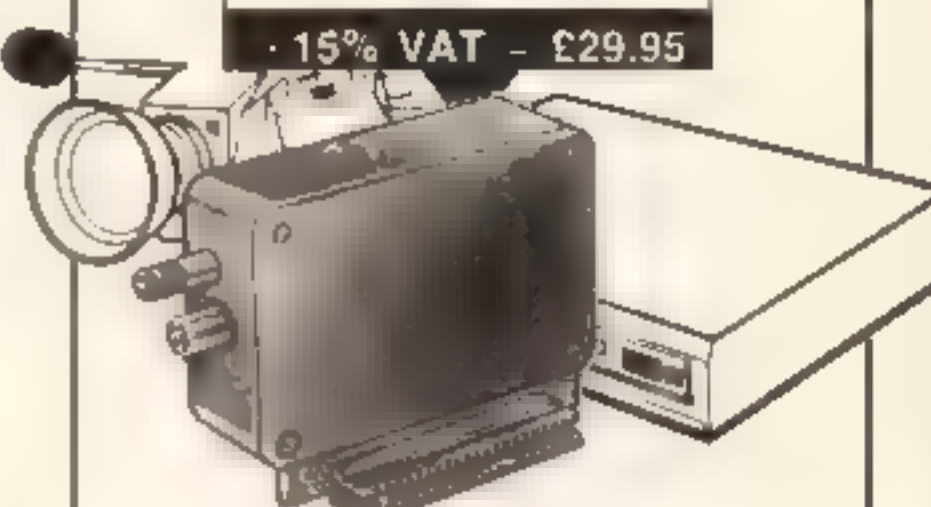
(laser printer running at 10 pages per minute = 900 CPS with 3 months on-site warranty)

Ask for our detailed brochures on these and other printers in our range.

VIDI-ZX DIGITISER

£26.04

15% VAT = £29.95



The digitizer that has the competition on their knees! Capture images from any video camera or recorder and use the PLUS D to store them to disc for editing later with the Animator 1. Has shading, high resolution and no distortion.

We also have a limited stock of the original Spectrum 128K Computer at £84.95 and a wide range of serious and games software. Call for details.

PICK-POKE-IT

£13.00

15% VAT = £14.95

The hacker's dream software. Break into any game and list the memory in Hex, Decimal, Ascii, or disassemble it instantly. All the PLUS D's snapshot features fully supported. Type in all the magazine pokes and even customise your own games.

Packages less than 1kg	£2.00
Standard Securicor	£4.50
Express next day delivery	£12.00

(subject to availability)

1 year full guarantee on all our products. Simple repairs procedure - you send, we fix! No-quibble full cash refund on hardware if you're not satisfied within 14 days!

WE ACCEPT
VOUCHERS

MGT
MILES GORDON
TECHNOLOGY

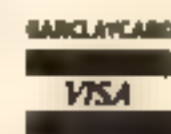
I enclose a large SAE for more details of MGT products.

Name: _____

Address: _____

Tel: _____

MGT DIRECT
Lakeside, Phoenix Way, Swansea Enterprise Park, Swansea.
SA7 9EH, U.K. Telephone: (0792) 791100 Fax: (0792) 791155





THE LAST NINJA II

SYSTEM 3

C64 • £12.99cs, £14.99dk
Also on Spec, CPC. Due next year on ST, Amiga, PC

When *The Last Ninja* finally appeared on the C64 early last year everybody was amazed by its state-of-the-art, film-like visuals. *TLN* combined the beat-em-up and arcade adventure genres – a strange blend that actually worked.

These factors, helped by a great deal of hype, catapulted *TLN* straight into the C64 charts, and it eventually achieved the number one position. Unfortunately *TLN* had one major flaw – a lack of heart-pounding action. Gameplay consisted of laboriously visiting each location (taking as long as you liked) and either killing or collecting something. Incredible audio-visuals could not hide this deficiency for long and resulted in many players just giving up.

The Last Ninja II has the same audio-visual quality as before, but now promises extended gameplay as well.



- C64: One of Central Parks many hazards – a knife throwing juggler!
- Spec:(Main pic) A whole new meaning ■ lights, camera, action.

● GAMEPLAY

TLN2 places you in the role of Aramakuni, hero of *TLN* and now master of the ancient ninja art. Unfortunately, you take the art too seriously, and while meditating one day, you manage to transport yourself through time and space, from your native 12th century Japan to 20th century New York. This is just the start of your problems, as your arch enemy, Kunitoki, has also managed the transition. So it's up to you (yet again!) to rid the world of the evil Kunitoki.

As with *TLN* you are represented on-screen by an agile Ninja sprite, who (by different joystick combina-

tions) can perform those Ninja actions: punching, kicking, stabbing and slashing, to name but a few. In true Ninja tradition you're adaptable, manoeuvrable and can handle any weapon you stumble upon.

During your quest for Kunitoki you'll encounter many of the dangers of modern day life. Items such as credit cards, hamburgers, muggers and policemen are all there ■ hinder (or help) your further progress.

The game is divided into six multi-load levels (central park, downtown Manhattan, sewers, opium factory, office block and shogun's retreat). Each level contains its own dangers, pitfalls and puzzles which have to be negotiated within a time-limit.

Other additions to *TLN* come in the form of five lives (instead of one), joystick control improvements and a score facility.

● GRAPHICS AND SOUND

Graphically, *TLN2* is even better than its predecessor, thanks to the artistic talents of Hugh Riley (graphic designer on both games). The animation, definition and colour of both backdrops and sprites is superb. The oriental-type soundtracks that accompany *TLN2* are well crafted and add to the atmosphere of the game, but the lack of sound effects (unusual for a martial arts game) mutes the enjoyment factor gained when knocking-out an opponent.

● OTHER VERSIONS

Spectrum *TLN2* manages to hold its own against the C64 version, albeit with a monochrome display. The CPC version should be available ■ you read this.

● EXPRESS VERDICT

TLN was a hard act to follow, but *TLN2* manages the task admirably. The state-of-the-art visuals are matched by tweaked gameplay, the boredom factor now gone. With six levels to complete before the final showdown with

Kunitoki, long-term interest is assured.

The only criticism concerns System 3's marketing of the product, *TLN2* comes complete with cotton Ninjitsu mask, rubber Shiraken Star and pseudo-3D map. Unfortunately these little goodies add an extra three pounds to the asking price (estimated value being 28p).

Despite the dubious merit of the extra goodies, *TLN2* is still one to add to your collection – especially if you can coax your software dealer into selling you the game separately.

★ ★ ★ ★ ★



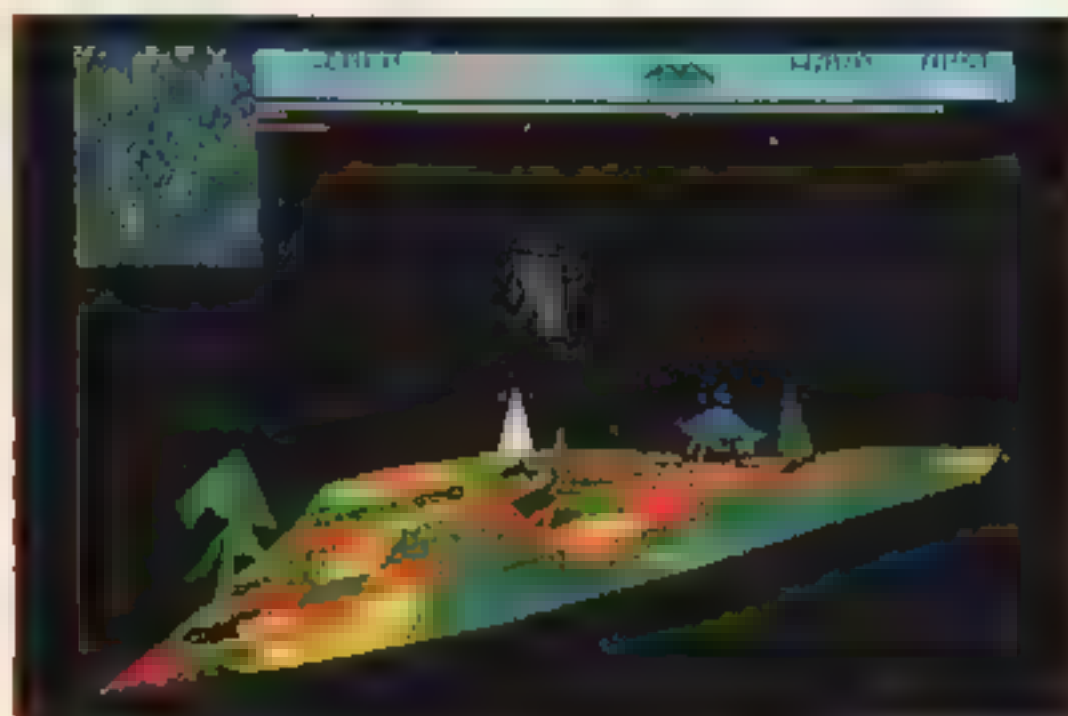
Something wonderful has finally happened...the Amiga version of the state-of-the-art Archimedes graphics outing ■ up and running at last.

● VERSION UPDATE

For those who don't already know, your mission is to fly an ultra-responsive hoverplane in solid 3D flight in a search for alien craft polluting a patchwork surface of fields and oceans.

The Amiga's sound is a distinct improvement over the ST version – spot effects are now in stereo and provide much greater atmosphere. Colliding with the sea produces the bubbling sound of your hoverplane sinking!

In its vision, style and attention to detail, *Virus* sets the standard for moving graphics. Pity then that gameplay is



- You line up your hoverplane for a shot at this infectious Seeder sowing its red virus. The scanner top left shows your current position and the blips ■ enemy craft.

rather repetitive. The Spectrum version can only be described ■ a distant relative of the 16-bit versions, bearing only a laughable resemblance in all departments.

★ ★ ★

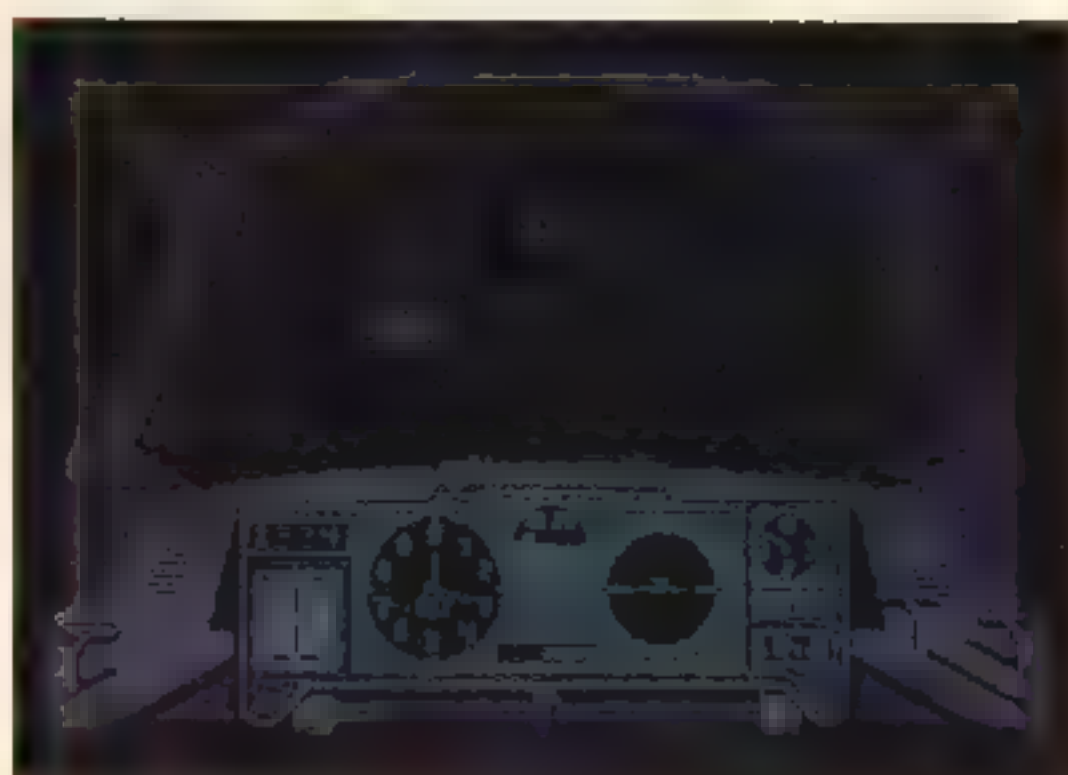


After its release on all the other major formats, *Night Raider* finally makes it onto the PC.

● VERSION UPDATE

Your task is to fly your Grumman Avenger, stationed on the aircraft carrier Ark Royal through enemy infested skies to sink the notorious German Battleship Bismarck.

With four views ■ choose from – the pilot's, engineer's, navigator's and rear gunner's, there's plenty to do along



- Gotcher! Another Dornier goes down in flames (CGA PC).

the way. The game is a combination of simulation, strategy and good old arcade action.

The CGA graphics are just about adequate, while the EGA version is quite pretty. Sound is up to the usual PC standards – i.e. dismal. With an engine note that sounds like a fast-dripping tap, you might choose to turn the sound off altogether.

The ST version has, not surprisingly, the best graphics, and mouse control is very handy for those action sequences. The 8-bit versions are rather less impressive but still good, while the PC version, with its poor graphics (in CGA mode) and awful sound is, alas, the worst of the bunch.

★ ★ ★



Savage is an axe-wielding warrior who has to battle his way through dungeons overrun with a manner of evil creatures bent on his destruction. His aim is to escape the dungeons into Death Valley – but that's only the beginning...

● GAMEPLAY

Right from the start **Savage** is tough – the swarms of attacking creatures are vicious and unpleasant, and it's going to take you quite a while to reach the end of the level and defeat the guardian. Do that, though, and you learn a password which will allow you to access Level 2.

This is an altogether different proposition, as you race across a landscape seen through **Savage's** eyes and strewn with ghastly green monoliths. You have to avoid crashing into these at the same time as shooting the skulls hovering over the ground.

Level 3 is different again. You control an eagle viewed side-on, and this time you are back at the castle, and trying to gain entry to rescue your beloved maiden who you were tricked into leaving imprisoned there.

● GRAPHICS AND SOUND

The gameplay is upstaged by the graphics, which are amongst the prettiest and most colourful you will see on a



● Level One, and Savage faces attack from all sides.

CPC. Animation and scrolling are good, as are the sound effects (you only get music at the start).

● EXPRESS VERDICT

Savage is very pretty and offers three distinct game styles. Against that, three levels isn't much, and the sheer difficulty of the game right from the start is only half a solution. It scores on initial appeal and variety, but whether the long-term interest is there is another matter.

● OTHER VERSIONS

Also out on the Spectrum, **Savage** should also be appearing soon on the Amiga, ST and PC.

★ ★ ★

PIONEER PLAGUE

MANDARIN

Amiga • £19.95dk

No other versions planned

Billed as the first game to feature all 4096 colours of the Amiga's HAM mode, **Pioneer Plague** also attempts to combine eight-way scrolling action with digitised speech and a variety of original stereo music scores.

● GAMEPLAY

The Pioneer Probe Mark IV is terra-forming any planet in its path, having lost an essential piece of code and gained a whole host of defence systems. It's also multiplying.

First you jump through sub-Euclidean space in your LifeStar cruiser and descend to the first of the stricken planets. The quicker you navigate this section, the fewer probes you'll have to take out once you've arrived.

You now find yourself above a Manhattan-like series of urban blocks and harbour areas, featuring the occasional control tower and fuel dump. At this point you swap mouse for joystick or keyboard, dispatch your 'Airship' and use local radar to spot Sky Hatches containing probes waiting to take off to take you out.

There are four kinds of robotic adversary – circular moving Star Shark fighters, homing bombs, air mines and 'Boxers' – devices which effectively reduce the space in which you can move. You can either take out these little beauties with photon missiles (fire button), or dispatch one or a team of programmable drones.

Once a planet is cleared you can return to the galaxy

PACMANIA

GRANDSLAM

Amiga • £19.95dk

Also on Spec, C64, CPC, ST, MSX.

Archimedes version under development.

When **Pacman** first appeared in the arcades back in 1980 it was an instant success and soon achieved cult status. This was partly due to its simple but addictive gameplay, colourful and advanced graphics (for the time) and great sound effects.

Although there were hordes of home computer versions of **Pacman** a few years back, recently there have been very few. That is, up until now. Thanks to Grandslam you can now enjoy the latest **Pacman** arcade incarnation – **Pacmania**.

● GAMEPLAY

Pacmania is played over a maze filled with dots, pills, fruit and other scrumptious items (burp!). You control Pac, a sort of 3D version of "Smiley" (the old 70's cult-badger now hip thanks to Acid House) who's sole aim is to travel around the maze eating any delicacies that come his way. Unfortunately ghosts protect the maze from munching marauders and collision with these is fatal. These ghosts (Inky, Pinky, Blinky, Clyde, Funky and Sue) live in the centre of the maze known as the cage, only venturing out when Pac's pigging out. Each ghost has its own personality (identified by colour) and reacts differently to Pac's movements.

Luckily help is at hand (mouth?), thanks to a few catch pills scattered around the maze, which give Pac the opportunity to hunt the hunters. Once a ghost has been consumed all that's left of the poor wretch is a pair of eyes which go scuttling back to the cage for a new suit. If Pac gets too greedy, though, he might just bite off more than he can chew because ghosts are in season for a limited period only.

Once Pac's gorged the maze dry it's on to the next maze, with more ferocious ghosties and a faster pace.

So far there's not a lot of difference from the original **Pacman**. Upgrades come in the form of four pseudo-3D eight-way scrolling mazes, with only a portion viewable at any one time. Other additions are audio-visual

improvements and a new feature – the ability to jump over the ghosts.

So with some 19 levels of play you should be assured of a frenzied feast of fast food frolics.

● GRAPHICS AND SOUND

Graphically, **Pacmania** manages to reproduce its arcade parent perfectly (well, almost). Although at first the graphics appear simple, this is just part of **Pacmania's** charm.

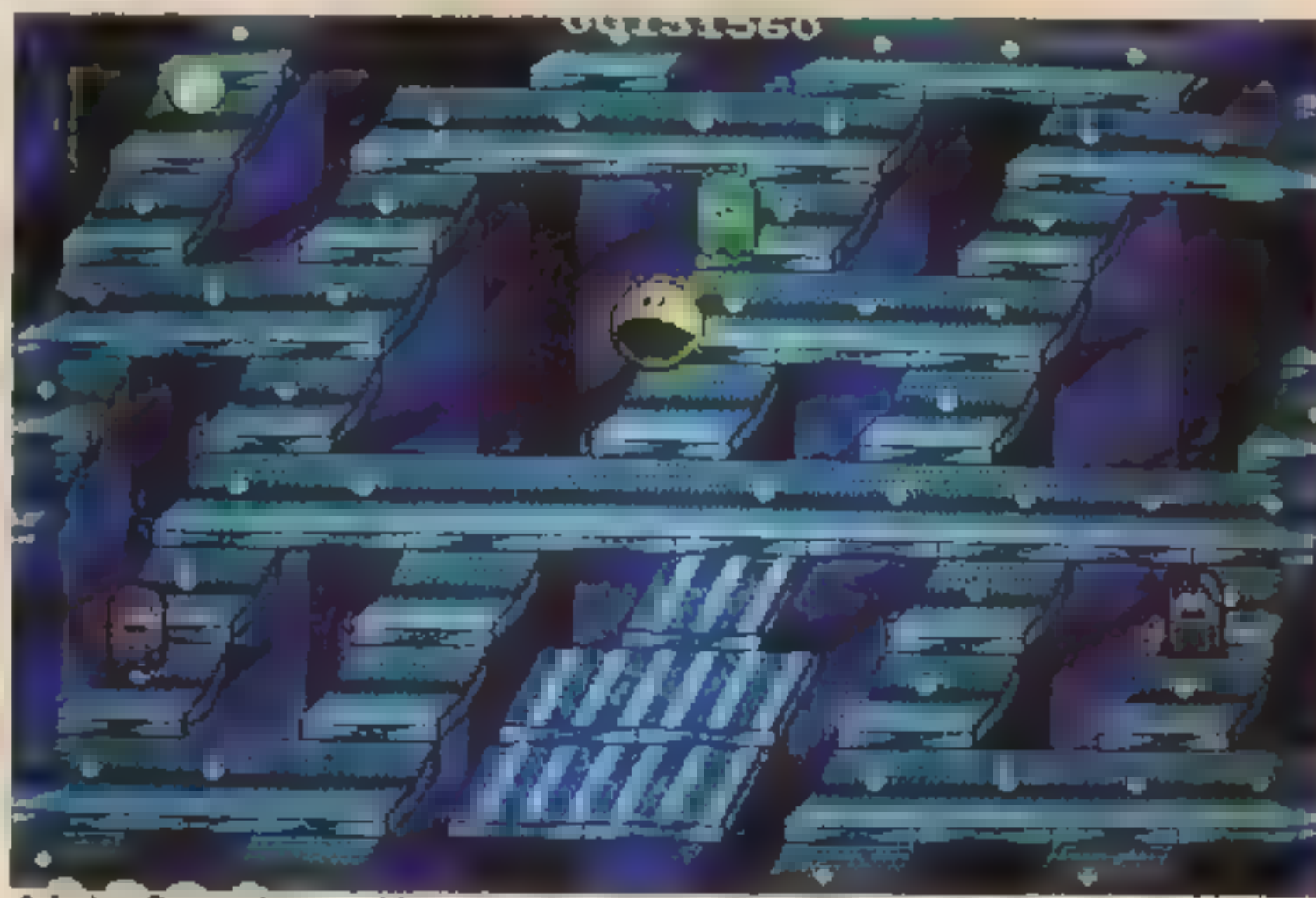
Pac and his foes are beautifully drawn and animated, with a good use of colour and definition. The characters and mazes all move smoothly on-screen and as an added bonus the whole of the screen is used.

The three soundtracks provided are simple but infuriatingly catchy and are accompanied by all those **Pacman**-esque sound effects that we've all come to know and love.

● OTHER VERSIONS

Pacmania is available now for all the other machines except the Archimedes (which is reported to be identical to the Amiga version).

The only noticeable difference with the other versions available is the screen display (half for the maze, half for game info) which detracts slightly from the brilliance of the full screen Amiga version.



● Amiga: Pacman bounces his way out of trouble, confusing the green ghost along the way.

● EXPRESS VERDICT

Pacmania has managed to capture all the ingredients that made the original so popular (simple addictive gameplay, simple but colourful graphics and excellent sound effects) and then used 1988 software techniques to improve it. The wide appeal is still there and is complemented by immediate aims and rewards.

Sure, gameplay may be limited, but **Pacmania's** the kind of game you can keep going back to and still enjoy, and is easily the best release from Grandslam so far.

Enough said – just visit your local software dealer and take it away!

★ ★ ★ ★

FISH

RAINBIRD

Atari ST - £24.95dk
Out soon on Amiga, PC, Mac, C64, CPC, PCW, Apple 2,
Spec + 3

Magnetic Scrolls' latest adventure seems to mark no major departure from the system successfully employed in *Jinxter* and *Guild Of Thieves*, which is a surprise since the interface used in their most recent release, *Corruption*, was the most sophisticated they've come up with.

However, *Fish* easily maintains Mag Scrolls' reputation as the most off-the-wall outfit ever to have surfaced in interactive fiction. In how many games do you star as a goldfish?! And a Fish-scientist at that?

● GAMEPLAY

"Warning! some fish are really Inter-Dimensional Espionage Operatives in disguise. Treat them with utmost respect, they have many worlds to save. And one of them might be yours." So says the initial blurb and things immediately become a little clearer - you're role is that of a special agent working for an organisation which has the technology to warp you somewhere else - as someone else. 'Host-Parasite Mode' it's called.

So after finding yourself floating upside down in a bowl you quickly find three warps inside a sub-aquatic plastic castle and you choose which one you want to explore. You're after a bunch of inter-dimensional anarchists known as the Seven Deadly Fins whose di-

bolical mission is to rid the world of water. They've sabotaged a device assembled to prevent this disaster and it's your job to find out how the device was corrupted, which one of the seven did it and replace the missing part.

Each of the first three warps works as a mini-mission which you must complete to move onto the final and most substantial mission - a trip to Hydropolis, realm of the fish people. One finds you wandering around a recording studio having warped into the body of a general go-for, the second has you stranded in the back of a roadie's van near a hippy happening and the third finds you deep in a forest dodging exploding parrots.

Weird isn't the word! You'll be either relieved or disappointed that there's no violence involved in any of this -

there's logic swimming around in there somewhere.

● PRESENTATION

Fish features the usual Scrolls' pull-down artwork - in this case simple 'hand-drawn' renditions of scenes. The pictures are designed solely for atmosphere rather than to provide any additional clues. If it's clues you're after there's a cypheric help section included which can be accessed by entering 'Hint'.

Text is clear and easily readable. As with all Rainbird releases there's a hefty package of supplementary material.

Aside from the 'Landscape' box cover and poster, there's a manual issued by the Department of Inter-dimensional Espionage covering all you need to know about warping for beginners, along with more bizarre inclusions such as a weekly travel card - the 'Fish-pass', a fish identification chart and a booklet on how to get the most from your fish.

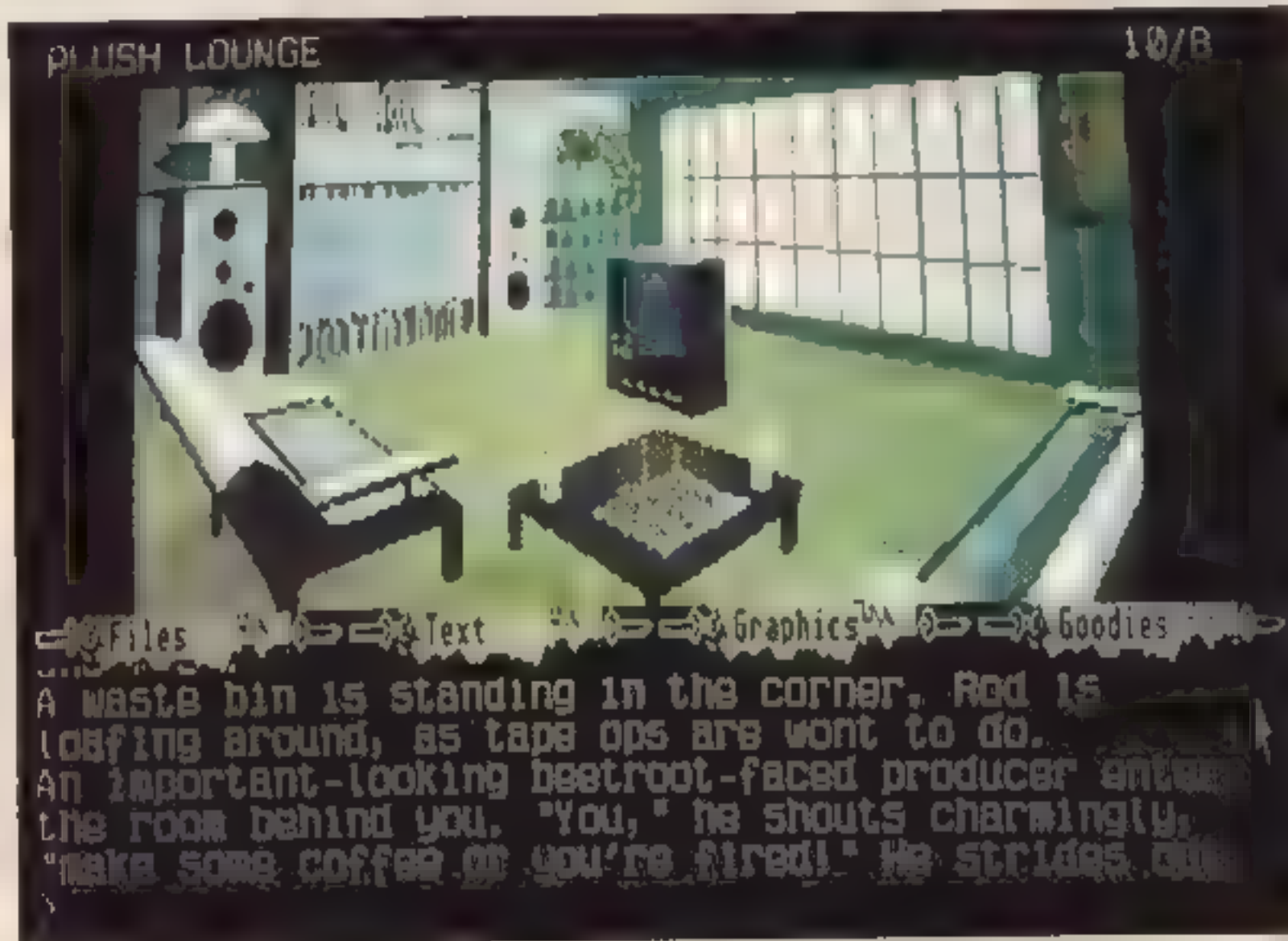
● OTHER VERSIONS

Due out in November are the Amiga and PC versions with releases on the Mac(kerel), C64, CPC, PCW, Apple 2, and Spec + 3 planned for the New Year. All versions are configured from Mag Scrolls' Vax and are essentially text-based, so there shouldn't be much difference.

● EXPRESS VERDICT

Despite sounding as though its authors are severely unhinged, *Fish* is one of the easier and more user-friendly Mag Scrolls' adventures, and relies on straightforward puzzle solving rather than esoteric inputs. The command system is more than adequate and gameplay is sufficiently engrossing to ensure an enjoyable passage through what could easily be the craziest adventure release of the year.

★ ★ ★ ★



entering 'attack so and so is met with a stiff 'you don't need to use violence in this game' - so the emphasis is placed firmly on using logical solutions to complete the puzzles. In a game obviously wacko it's a good job

able passage through what could easily be the craziest adventure release of the year.

map and choose your next port of call. If by this time all planets have become infected you have failed in your mission and it's game over. Until next time.

● GRAPHICS AND SOUND

The two most obvious elements are the beautifully-drawn, HAM mode inter-level screens and the ever-present chunky funk of the backing scores. Sub-Euclidean Space - a fast-moving tunnel of fractal mapping - is also very interesting. The planetary surfaces are also quite competent graphically but perhaps a little too repetitive in their detail.

● EXPRESS VERDICT

Pioneer has all the makings of a classic - its graphics are sexy and overall presentation very professional. The fractal sequences alone could make the basis for a game. But you're left with the nagging feeling that 4096 colours is

probably 4000 more than you need when more depth in gameplay and involvement is called for.

★ ★ ★



International Karate made its debut in 1985 and soon earning the reputation of being the last word in beat-'em-ups. The sequel, *IK+*, has a new feature - a third, computer controlled, opponent.

● GAMEPLAY

IK+ is a one or two-player game divided into two rounds: combat and bonus. Using different joystick combinations each player can produce 17 different manoeuvres such as punch, kick, block, head-butt, jump and move left or right.

The idea is simply to knock out your opponent by whatever means possible. At the end of the round the loser is dropped (unless there's a tie), his place taken by another computer opponent. Then it's on to the next round...

After a few combat rounds the bonus level appears, with each human player competing against either bouncing balls (and severed heads) or exploding bombs. The game

ends when only the computer opponents remain.

● GRAPHICS AND SOUND

IK+ might have gained a third player, but the action now takes place against just the one backdrop. There are, though, some animated background sequences, including falling leaves, flying fish and even a crawling worm.

The sound effects are great, conjuring up the atmosphere of those chronic 1970's martial arts films perfectly.

● OTHER VERSIONS

Available on 8-bit formats for some time, *IK+* can now be found on Ocean's *We Are The Champions* compilation. The Amiga version should be out shortly.

● EXPRESS VERDICT

IK+ is the best beat-'em-up to date, lacking only long-term interest - which can be offset using the two-player option. This aside, *IK+* is an enjoyable game.

★ ★ ★ ★



● Yes, there's 4096 colours kicking around in there - just one of the several inter-level screens. Pity it's not a backdrop to the action.



● One beat-'em-up the sun will never go down on...

See us at
Commodore Show
Stand No. 118

THE BEST REASON FOR BUYING AN ATARI MAIL ORDER POOLS-SYSTEM !! (TM) TRADE WELCOME INCORPORATING - POOLSBUSTER & POOLSPLANNER

See Us At
Atari Show
Stand No. 52

OTHERS CALL THEIR POOLS PROGRAMS ULTIMATE. WE CALL OURS "THE" POOLS PROGRAM.

There were and still are a couple of pools programs for the Atari ST that guarantee to you performance better than chance (?) or promise you power? to forecast the pools the way you want. Others are asking you for disk for free demos while weeks are going by and you are missing your chance for a dividend. Nevertheless **pools-system** still remains the only one in the market that delivers the goods. Lets have a look at some facts. **Fact** user friendly and still the only one that does not require you to be some kind of a football expert or hot shot system analyster. **Fact** pools systems is the only one that performed even slightly during the difficult & unpredictable Australian season. **Fact 13/8/88**. 4 ways out of the recommended first 6. 10 homes out of the recommended first 15. **20/8/88** Start of the English season, the system trapped 9 out of the 14 score draws & 4 no score draws. **27/8/88** 9 out of the 12 score draws & 3 out of 4 no score draws. 4 homes out of the recommended first 6. **3/9/88**, 6 homes out of the recommended first 7. 4 ways out of the recommended 6. 5 out of the 7 score draws & 2 out of the 3 no score draws. 40 correct results out of the 58 possible. **Fact**, all forecasted printouts available at any time for any checks. So do not waste your time with any other programs or systems. They are not going to entertain your hopes or wishes. And to top all the facts, we guarantee the **Pools-System** performs better than any other pools program in the market on any computer, because we guarantee to you that using the **Poolsbuster** in cooperation with **Poolsplanner** you are going to win the pools more than once a year.

STOP PRESS!! What does the customer say: "I was very impressed with the general standard of the programs & their ease of use. I had a look around the program & worked out how to input the data without the use of the manual which shows just how good the program structure is set out. To get to the point, the very first entry I did came up trumps with 11 lines of 21 1-2 points. It brought me a win of £11.88. Not bad for a first attempt. Thanks for an amazing program. Regards P.J.L. Solihull. (Name & Address with held for obvious reasons.)"

APOLONIA SOFTWARE (TM) PRESENTS: COMPUSHOT 1 - THE BEST PRICES FOR ATARI AND THEST AND AMIGA HARDWARE AND SOFTWARE. JUST HAVE A LOOK AT SOME EXAMPLES

Pools-System.....	£40.00
Hi-Soft Basic Atari.....	£69.00
Power Basic Atari.....	£46.00
APL68000 Atari.....	£86.25
Fast ST Basic (Rom) Atari.....	£76.68
Fast ST Basic (Disk) Atari.....	£38.27
Run Time Disk (Fast Basic) Atari.....	£10.64
Back Pack (Rom) Atari.....	£44.85
Lisp (Metacomco) Atari/Amiga.....	£143.75
Pascal (Metacomco) Atari/Amiga.....	£83.95
Expert Systems (Infogrms) Atari.....	£75.90
Forth MT (Abacus) Atari.....	£42.55
FTL Modula 2 (Hi-Soft) Atari.....	£62.10
FTL Editor Toolkit - Atari.....	£39.97
GFA Basic Interpreter - Atari.....	£40.25
GFA Basic Compiler - Atari.....	£40.25
LatticeC (Metacomco) Atari.....	£89.70
Devpac ST-V2.00 Atari/Amiga.....	£49.45
Logistix (Grafox) Atari.....	£95.45
Masterplan (Ditek) Atari.....	£69.00
VIP Professional Gem - Atari.....	£110.40
Superbase Professional - Atari.....	£190.23
Superbase Personal - Atari/Amiga.....	£77.29
Fleet Street Publisher - Atari.....	£98.51
Signum (Signal) Atari.....	£160.00
1st Word Plus (GST) Atari.....	£65.00
Wordwriter (Timeworks) Atari.....	£65.00
ST Doctor (Computer Concepts).....	£16.00
Disk Doctor (Antic) Atari.....	£22.92
Prosound Designer - Atari.....	£52.97
Pro Midi (Sampler Player) - Atari.....	£15.00
Pro Sound with Midi - Atari.....	£61.23
Quantum Paint (Eidersoft) Atari.....	£19.47
Quantum Paint Proff. (+Toolkit).....	£27.28
ST Omnires (Soft. Colour/Mono Switch).....	£33.48
Turbo ST (Software Blitter) Atari.....	£33.48
PC-Ditto Atari (IBM EMUL).....	£60.98
Flash-Bak & Flash-Cache (High Speed Hard Disk Utilities) For the Atari ST.....	£28.43
Saved! (The Desk Accessory) Atari.....	£24.20
Hi-Soft WERCS . (Wimp Environment Resource Construction Set. Easy to use and powerful RCS . Works in any resolution. Intuitive environment & complete facilities).....	£24.20
TWIST The best software switcher. Up to 14 programs resident at the same time - Atari.....	£24.20
STAC . The best adventure creating program for the Atari. Creating your own adventures for fun or sale.....	£29.08
Acquisition - Amiga.....	£183.90
Digi Paint (PAL) - Amiga.....	£34.91
Digi View V 3.0 (Inc Adapter) - Amiga.....	£136.00
Digi Droid - Amiga.....	£56.50
Photon Paint - Amiga.....	£53.50
Express Paint V.2.0 - Amiga.....	£46.30
Face 11 Amiga.....	£19.00
F-Basic - Amiga.....	£55.50
X CAD Amiga.....	£333.50
Pro Write V.2.0 - Amiga.....	£65.00
Kind Words - Amiga.....	£39.50
Analyze! V.2.0 (Brown Waugh) Amiga.....	£107.75

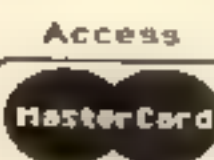
Scribble (Brown Waugh) - Amiga.....	£85.00
Organize (Brown Waugh) - Amiga.....	£85.00
BBS-PC (Brown Waugh) - Amiga.....	£85.00
Publisher 1000 (Brown Waugh) - Amiga.....	£160.00
Music Studio (Activision) - Amiga.....	£29.00
Lattice C (Metacomco) - Amiga.....	£99.00
Lattice C Proff (Metacomco) - Amiga.....	£230.00
Studio Magic - Amiga.....	£50.00
Pro Sound Designer (Complete) - Amiga.....	£65.00
Pro Sound (Software only) - Amiga.....	£27.00
Pro Sound Designer with Midi - Amiga.....	£76.00
Pro Midi (Midi Sampler for PSD) - Amiga.....	£27.00
Pro Sound Tool Kit - Amiga.....	£27.00

Atari 520 STFM (new) 1MB Drive with FREE £400 worth of Software plus Compushot 1 Starter Kit £349.00. Atari 520 STFM as above plus Pools-System - £359.00

Atari 1040STFM(New)+Compushot 1 Starter.....	£449.00
Atari 1040STFM as above + Pools-System.....	£459.00
Atari 104 STFM + Mono Mon.....	£533.00
Atari 1040STFM + Mono + PLSTM.....	£549.00
Atari Mega ST2 + Compushot 1 Starter.....	£775.00
Mega ST2 as above + Pools-System.....	£785.00
Mega ST2 + Mono + Starter.....	£865.00
Mega ST2 + Mono + Starter + Pools-System.....	£875.00
Mega ST4 (4MB RAM) + Starter.....	£1050.00
Mega ST4 + Starter + Pools-System.....	£1070.00
Mega ST4 + Mono + Starter.....	£1140.00
Mega ST4 as above + PLSTM.....	£1150.00
Mega ST2 + Mono + Laser Printer + Fleet St Publisher + 1st Word + Starter.....	£1999.00
Mega ST2 as above + PLSTM.....	£2009.00
Mega ST4 + Mono + Laser Printer + Fleet St Publisher 1st Word+20MB Hard Disk+Starter.....	£2698.00
Mega ST4 as above + PLSTM.....	£2710.00
Triangle 1MB 2nd Drive - Atari.....	£95.00
Triangle 0ble 3.5" Drive-only for the Atari STs and STMs-not for the STFMs.....	£179.00
Triangle 2.5" Drive 40/80 Track Atari.....	£130.00
Triangle 5.25" with PC Ditto Atari.....	£199.00
Triangle IBM 2nd Drive Amiga.....	£85.00
Triangle Internal A2000 31/2" Kit.....	£79.00
Cumana 1MB 2nd Drive Atari.....	£112.90
Cumana 1MB2nd Drive-Amiga.....	£125.00
Atran 20MB Hard Disk Drive (SH205).....	£548.00
Triangle 20MB Hard Disk Drive - Atari.....	£435.00
Triangle 40MB Hard Drive - Atari.....	£603.18
Supra 20MB Hard Drive.....	£502.97
Supra 30MB Hard Drive.....	£633.40
Miracle WS2000 MODEM (Atari-Amiga).....	£115.00
Miracle WS4000 MODEM (Atari-Amiga).....	£169.00
Linnat MODEM (Atari-Amiga).....	£140.00
Series Four 2123S MODEM (Atari-Amiga).....	£260.00
Nightingale MODEM (Amiga) Man. Dia.....	£110.00
RS232 MODEM Cable (Atari-Amiga).....	£12.00
Printer Cable (Amiga/ST).....	£12.00

ST To SCART Cable.....	£12.00
Atari SLM804 Laser Printer +SLMC804.....	£1129.99
Epson NLX800 DOT Matrix 9 Pin Print.....	£277.50
Star LC10-Mono/DOT Matrix/ 9 Pin.....	£240.00
Star LC10-Colour/DOT Matrix/ 9 Pin.....	£260.00
Star LC24-10/24 Pin-Multilori.....	£387.55
Star Laser Printer (IMB Standard).....	£1740.89 + VAT
Eider Soft Graphic Tablet - Atari/Amiga.....	£239.03 + VAT
Amiga 500 + Starter Kit.....	£318.00 + VAT
As Above + Modulator.....	£336.00 + VAT
Amiga 500+1084 Colour Mon+Starter.....	£548.30 + VAT
Amiga 500 Business Pack (A500 + Mono Monitor +Printer + The Works+Transformer-Mono Text IBM-PC EMUL).....	£559.23+ VAT
Amiga 500 as above but with A1084 colour monitor instead of the Mono Monitor.....	£674.00 + VAT
Amiga Modulator A520.....	£23.50
A501 EXP Board with Clock.....	£110.00
Amiga 1084 Colour Monitor.....	£245.21 + VAT
Amiga 2000.....	£976.50 + VAT
Amiga 2000 -1084 Colour Mon.....	£1151.75 + VAT
Amiga 20MB Hard Drive for 2000.....	£620.00
Micron 2MB Mem. Expansion -A2000.....	£370.42 + VAT
Micron 1MB Mem. Expansion.....	£391.72+VAT
A500/A1000.....	£198.00 +VAT
Pro RAM2000 (8MB RAM) Unpopulated.....	£281.50 +VAT
Flicker Fixer.....	£212.60 +VAT
Genlock A5000/A2000 - (A8802).....	£605.00 + VAT
Proff. Genlock A500/A2000 - (A8806).....	£151.13 + VAT
Perfect Vision (Real Time ViD Digit).....	£117.94 + VAT
A1010 1MB 2nd Drive (All Amigas).....	£25.00
Midi Interface (Standard Serial) -Amiga.....	£239.10 + VAT
Philips CM8833 Stereo Col Mon.....	£269.20 + VAT
Philips CM8852 High Res Col Mon.....	£84.10 + VAT
Amiga 1900M Mono Monitor.....	£18.95
Monitor Station (Tilt & Swivel) for all 12" & 14" monitors.....	£30.00
Monitor Master (Best in the market for any Atari ST,520,1040 Mega STs-Colour/Mono Switch Box.....	£24.00
Mouse Master (Unique Mouse & Joystick Switch. Allows connection of Joysticks & a Mouse or any other Controller with any combination that you'll require. No unplugging cables. The best Mouse/Joystick Port Controller) Atari/Amiga.....	£21.00
Mouse Path (The best Mouse Mat around. Special anti-static & unique surface for a better grip & short distance travel. Perfect for any Mouse on any Computer).....	£5.50
Monitor Stands (Very elegant and specially made to fit any Atari or any Amiga computer).....	£24.00
Unistand Printer Stand.....	£9.50
PVC Dust Cover - Mega STs.....	£7.50
PVC Dust Cover - 520STFM, 1040STFM.....	£4.00
PVC Dust Cover -SC1223, SM125.....	£5.00
Disk Boxes: 40 * 3.5" Disks.....	£8.95
Disk Boxes: 80 * 3.5" Disks.....	£10.95
Disk Boxes: 100 * 3.5" Disks.....	£12.95
Disk Boxes: 120 * 3.5" Disk.....	£13.95
Disk Boxes: 50 * 5.25" Disks.....	£8.95
Disk Boxes: 120 * 5.25" Disks.....	£13.95

New Atari PC3 IBM-PC compatible with switchable clock speed-4.77 MHZ or 8MHZ 8088 Micro Processor. EGA,CGA+Hercules Graphics Modes. Built in Twin Drive. 640KRAM. MS DOS 3.2 Operating System. Optional 8087 Maths Co-Processor Socket. Detachable XT Style Keyboard. Includes Parallel & RS232 Serial Ports. 256K Screen RAM. Supplied with Mouse Mono Screen Resolution of 720*350. Colour Screen Res. 640*350. Palette of 64 Colours. 16 can be displayed at the same time. Works with any CGA, MDA,EGA or Multi Frequency Monitor. Comes with **FREE Software & **FREE** Manual. R.R.P. = £647.49. Our price is only £580.00 inclusive! Atari PC3 as above + EGA Mono Monitor R.R.P. = £747.49. Our price is only £670.00 inclusive!!! Atari PC3 + EGA Mono Monitor + 30 MB Hard Disk R.R.P. = £1092.49. Our price is only £819.99 + VAT!!! All prices are inclusive of VAT & Delivery unless otherwise stated. These are only some examples, for more information call: **COMPUSHOT 1 ON: 01-738-8400****



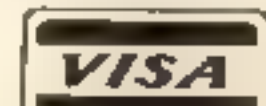
Prices are always fluctuating up or down. Call for the latest information and for availability. Mail Order Only. Speedy Delivery. No Hidden Extras.

STOP PRESS. Look 1 1/2" Disc(DSDD): 10 for £11.00. 20 for £21.00. 40 for £40.00. and 50 for £47.50. For the best prices for all Atari-Amiga Hardware (Computers, Peripherals and Accessories call: **Compushot 1 at 01-736.8400.** (Make Chqs/P.O.s payable to Apolonia Software and send to:

:Apolonia Software, DPT STAM 11, South Bank Business Centre, Unit 25(M). Thames House, 140 Battersea Park Road, London, SW11 4NB.

APOLONIA SOFTWARE - THE COMPANY THAT CARES

BARCLAYCARD



WE ACCEPT
VOUCHERS

The 68000's other instructions

The 68000 assembly language instruction set is so large that certain functions are duplicated. Here is a list of the most efficient instructions with their counterparts:

MOVEQ.L #0, register
instead of CLR.L register
ADD.W register, register
instead of MULS #2, register
SUB.W register, register
instead of DIVS #2, register
TST.L register
instead of CMPL.L #0, register

Time-saver software

You may think the £10 - £20 extra for an internal clock on your Amiga memory upgrade a bit rich. However, there is an easier way of saving the clock time.

Assuming you have correctly set the time and date type from the CLI "#d df0:s/ startup-sequence". This will save the time and date onto disc. When you reboot at a later stage of the day all you have to set is the time using DATE 14:30.

When you start again tomorrow you must reset the date using DATE tomorrow 9:00 then type "#d df0:s/startup-sequence"

In the MODE for monitors

Most PC users may be familiar

Share and share alike

Doc File and Tech Tips are our weekly slots for problem solving. The Doc is our resident computer medic, ready to solve your problems (Sorry, he doesn't do house calls, but then how many doctors do these days.)

Whatever your problem - hardware, software, programming, communications, trouble finding a book or a program you need - you should be able to get an answer here. And because Express is weekly, you won't have to wait long for an answer.

Tech Tips is the space for your contributions: bug reports, undocumented short-cuts and features, work-arounds for problems in software packages. Regardless of your machine, send those hints here. Write to Doc File or Tech Tips, New Computer Express, 4 Queen Street, Bath, BA1 1EJ.

entire display to the right or left using either of the following:

MODE ,r
MODE ,l

The comma signifies the missing operand for the display modes (40, 80-column text, colour etc). You can include this operand if you wish.

To help you get things lined up properly, you can also use a test pattern:

MODE ,r,t

This shifts the screen one character right, and MS-DOS will then ask if alignment is correct. Typing Y ends the process, while typing N shifts everything one more space and repeats.

You can include the command in AUTOEXEC.BAT file to have this done automatically at start-up if you wish, although if your display is badly off-centre you'll need to perform multiple MODE commands since you can't specify the number of spaces to be shifted.

More info on Amiga INFO

Use of the Amiga's INFO command, either from Workbench or from the CLI, can be frustrating since it always seems to give you information on the disk currently in the drive. This isn't particularly useful, since you'll almost certainly

want information about some other disk - usually to see if there's enough space to copy a file.

The way round this is to use the command from the CLI in the form:

INFO ?
The query (?) asks the Amiga for the correct syntax of the command, and any necessary parameters. In this case, Amiga-DOS will respond with "none",

because there are no other parameters. However, this pauses execution of the command until you type return.

So now, simply remove your Workbench disk, insert the disk you actually want INFO to operate on, then press return. You'll actually get INFO on the disk you want.

Get SET for protection

If you've ever blithely issued an ERA *.* command on your PCW, only later to realise that there really was something on your disk you wanted to keep, this one's for you.

You can write-protect individual files quite simply using the SET.COM utility (you knew there had to be some purpose for it).

First, copy SET.COM from your CP/M master disks to the RAM disk using PIP M:=SET.COM.

Then insert the disk containing the file you want to protect and enter M: SET filename [RO], thus making it read-only.

Wildcards are allowed in the filename, so you could, for example, protect all the chapters of your great 20th Century Novel with the command M: SET novel.* [RO].

Files treated in this way cannot be erased, although they can be destroyed by formatting the disk.

To un-protect them, also use SET.COM, in the form M: SET filename [RW].

Commodore's joystick japes

An old one this, but it still catches a lot of people out: beware the auto-firing joystick.

Because the C64's joystick port is handled by the same I/O chip as the keyboard, strange things can happen.

The usual scenario is, after a hard night's blasting the living daylight out of alien scum, you return to the 64 the next day and turn on your machine.

As you begin typing spurious characters appear on the screen. Usually, you put this down to your fumble-fingered typing, delete it, and start again. More random characters.

"Argh!" you cry. "My keyboard has had a mental breakdown."

Not a bit of it. You'll probably find you've simply left your joystick's autofire switched on. turn it off and all will be well again.

Similar things can happen if you leave your joystick plugged in with something resting on it (your foot, perhaps). If the handle is off centre it will also send spurious codes to the 64, confusing the hell out of the poor beast.

Animating Neochrome

I have recently found out about the "little known" animation facility of Neochrome by Atari Corp. By selecting the animation facility from clicking with the right mouse button in the hole of the R of GRABBER. You are then presented with six bars with four containing xx and two saying ADD and DEL.

First load in your picture, eg the Dire Straits picture you get with the computer. With the mouse outline the area which you wish to animate. Now press "add". The current picture is now the first frame of your animation sequence.

The area you outlined should be black, so now press the right mouse button. You can now either alter the picture normally or move the area by moving the mouse while holding the button. After you have changed the picture press ADD once more. This is your second frame.

You can make up to 99 frames.

Once you have finished rewind the sequence by clicking on the box next to ADD. To run each frame click on the centre outlined box. You can load or save the sequence by clicking on the appropriate function on the left.

The dead zones of the PC keyboard

One of the great things about the PC keyboard is that with the various combinations of ALT, SHIFT and CTRL, you can normally assign a multitude of functions to each key.

However, there are one or two dead zones, and some are quite peculiar. For example CTRL will not work with any of the top row number keys (except 2, 6 and -), nor with the keypad keys 8, 5, 2, -, +, Ins and Del.

CTRL-TAB does nothing, nor does ALT-TAB, ALT-ESC, ALT-bs or ALT-ENTER.

A good reference source for extended keycodes is any of Borland's Turbo manuals.

THE ULTIMATE CHEAT

Stuck on *Ultima IV*? Having difficulty getting the locals to tell you anything useful? Ve haff vays of mekking zem tok!

At least on the PC versions (and there's no reason to assume that other formats aren't the same) all of the characters' conversations are stored in a series of files with the TLK extension.

So to view them, simply TYPE them to the screen, or copy them to the printer picking out such useful snippets as the locations of the shrines and stones, and the very mantras themselves.

This is not an instant victory, if only because you still have to be a jolly active adventure to become an avatar, but it should make life easier.

with the MODE command in MS-DOS for switching between various screen modes, or possibly for controlling the serial port.

However, there is another, less familiar use.

Many PC monitors do not have a horizontal hold switch, which can mean you display being slightly off-centre on the monitor.

MODE allows you move the

3 1/2"

DS/DD 135TPI
100% Certified
Lifetime Guarantee

BENCHMARK BRANDED

10	£12
20	£20
50	£44
100	£84
200	£160
500	£388

5 1/4"

DS/DD 48TPI
100% Certified
Lifetime Guarantee

BENCHMARK BRANDED

25	£10
50	£18
100	£34
200	£61
500	£146
1000	£279

3 1/2" DISK BOXES

10 Capacity Library Case (per pack of 6)	£5.70
40 Capacity Lockable Box	£5.25
80 Capacity Lockable Box	£7.25

5 1/4" DISK BOXES

10 Capacity Library Case (per pack of 1)	£5.70
50 Capacity Lockable Box	£6.25
100 Capacity Lockable Box	£7.25
140 Capacity Lockable Box	£8.25

DATA SWITCH BOXES

2 Way RS232, 25 Way D Type	£19.50
2 Way Cent, 36 Way	£21.50
3 Way RS232, 25 Way D Type	£24.00
3 Way Cent, 36 Way	£26.00
4 Way RS232, 25 Way D Type	£28.50
4 Way Cent, 36 Way	£29.50
2 Way X Over, RS232	£24.00
2 Way X Over, Cent	£26.00

2 WAY DATA SWITCH+CABLE

Small Compact Data Switch Box fitted with one cable + 2 25 Way F. Sockets. Cable end terminated with either 25 way M. or 36 way M. Simple push button operation

RS232 M. Cable Termination	£19.50
Cent M. Cable Termination	£21.50

PRINTER STANDS

132 Column Space Saver	£28.95
80 Column Space Saver	£24.95
80 Column Standard Plastic	£13.99
80 Column Moulded with Tray	£18.00

ACCESSORIES

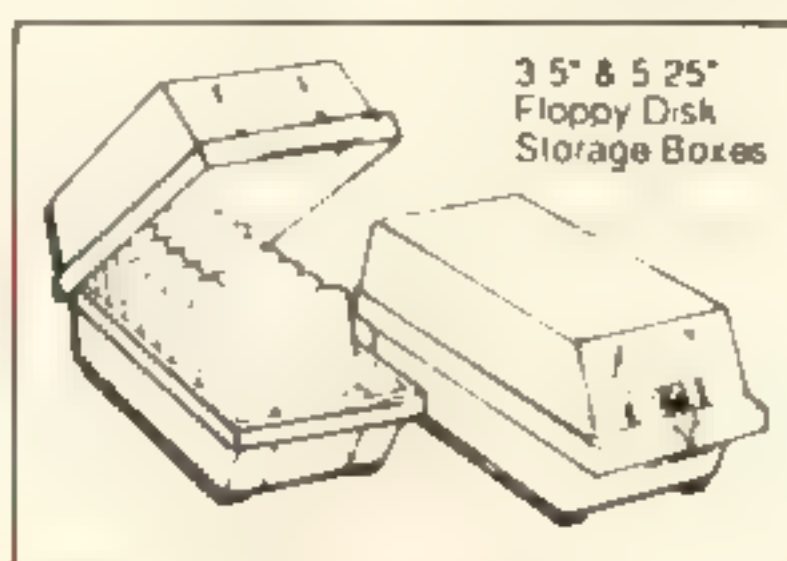
Tilt & Turn Monitor Stand 12"	£10.75
Tilt & Turn Monitor Stand 14"	£12.50
5.25" Mailer (Plastic) Pack of 10	£6.50

DE-LUX 5.25" CLEANING KIT

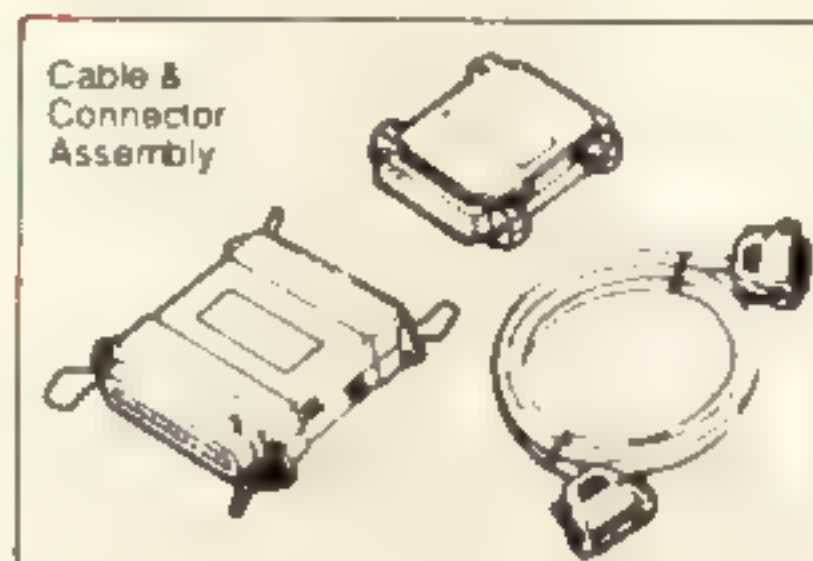
C476 In Carry Case	£16.50
--------------------	--------

CARDS & JOYSTICKS

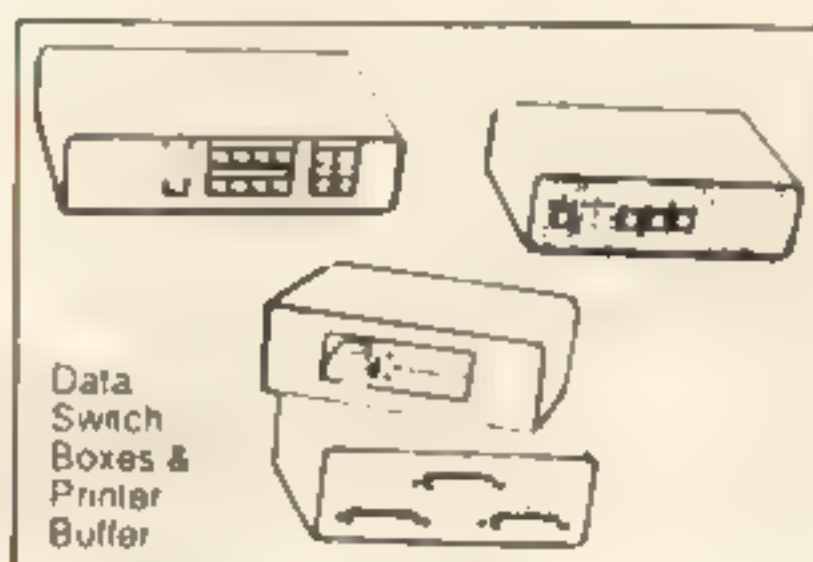
IBM Type 2 Port Games Card	£19.99
IBM Type Joystick	£15.99
Joy Ball Commodore/Atari	£7.99
Wiz Card Commodore/Atari	£4.99



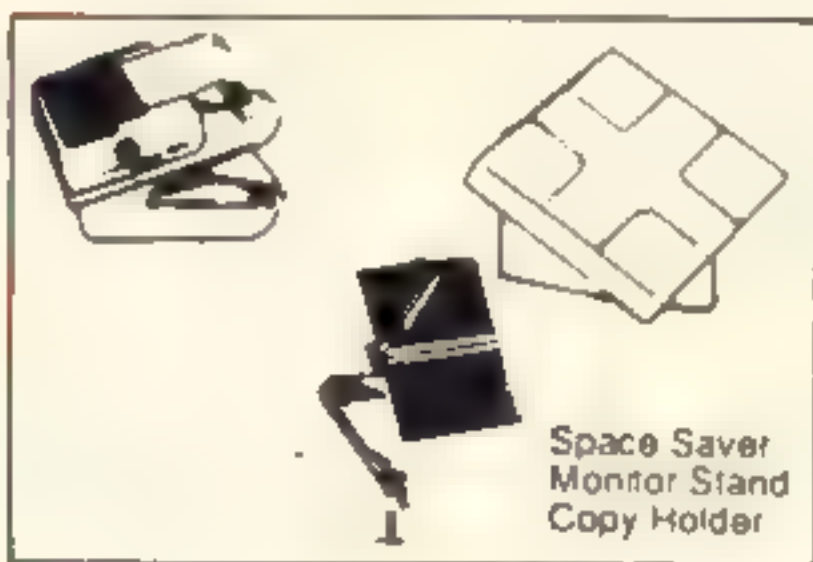
3 1/2" & 5 1/4"
Floppy Disk
Storage Boxes



Cable &
Connector
Assembly



Data
Switch
Boxes &
Printer
Buffer



Space Saver
Monitor Stand
Copy Holder

SEE US AT THE PC SHOW
ALEXANDER PALACE
ON THE 25th TO 27th Nov

3 1/2" BOX AND DISKS OFFER

20 3.5" DS/DD Disks Plus 40 Capacity box	£24.00
40 3.5" DS/DD Disks Plus 40 Capacity box	£38.00
50 3.5" DS/DD Disks Plus 80 Capacity box	£48.00

All boxes have lock and two keys

5 1/4" BOX AND DISKS OFFER

25 5.25" DS 48TPI Disks Plus 100 Capacity box	£16.00
50 5.25" DS 48TPI Disks Plus 100 Capacity box	£24.00
100 5.25" DS 48TPI Disks Plus 100 Capacity box	£40.00

All boxes have lock and two keys

DATA CABLES

25 Way M - 36 Way M IBM Type	£7.95
25 Way M - 25 Way M RS232	£7.95
36 Way M - 36 Way M Cent	£7.95

All 6ft Long

GENDER CHANGER

25 Way F to 25 Way F 1 to 1	£5.25
25 Way F to 25 Way M 3 to 1	£7.50
25 Way F to 25 Way M 2 to 2	£7.50
25 Way F to 25 Way M 1 to 3	£7.50

PRINTER BUFFERS

PB64-1 1 IN 1 OUT 64K	£80.00
PB64-2 1 IN 1 OUT 64K	£99.00
PB256-1 1 IN 1 OUT 256K	£150.00
PB256-2 1 IN 1 OUT 256K	£175.00

COPY HOLDERS

A4 Angle Poise Type	£13.70
A4 Desk Top Type	£8.90

MOUSE MATS ETC.

Rigid Double Sided	£4.50
Semi-Rigid	£4.00
Mouse House	£4.00

DISK DRIVE HEAD CLEANERS

3.5" Head Cleaner + Fluid	£3.50
5.25" Head Cleaner + Fluid	£2.50

Price only if bought with other products

EXTENSION CABLES

PC 1512 Monitor Kit	£19.95
PC 1640 Monitor Kit	£19.95
PC 1512/1640 Keyboard	£7.95

DISKS DISKS DISKS DISKS DISKS DISKS DISKS DISKS DISKS DISKS

5.25" SS/DD 48TPI	25	£9.00	50	£16.00	100	£30.00	500	£148.00
5.25" DS/DD 96TPI	25	£11.00	50	£20.00	100	£36.00	500	£176.00
5.25" DS/HD 1.6Meg	25	£29.00	50	£49.00	100	£83.00	500	£348.00

ALL DISKS INCLUDE ENVELOPES AND USER LABEL SETS

ALL PRICES INCLUDE VAT & P&P. UK & BFPO ORDERS ONLY

**M
C
S**

Cheques & Postal Orders to:-

Manor Court Supplies Ltd

DEPT NCE, GLEN CELYN HOUSE, PENYBONT, LLANDRINDOD WELLS, POWYS, LD1 5SY

EDUCATION AND GOVERNMENT ORDERS WELCOME

WE ACCEPT
VOUCHERS

24 Hour Orderline: 0597 87 784

Telephone: 0597 87 792



Business or pleasure

What has happened to Atari's much-hyped business push for the ST? The latest bundling deal doesn't exactly do much for the ST's serious image; 21 games, joystick plus organiser software. Even this month's Atari User Show at Alexandra Palace is aimed at games players.

Atari won't argue the point: it's booked lots of floor space, a large proportion of which will house an amusement arcade. No mention, of course, of the Hyper series, Microsoft Write or the portable ST.

The Hyper series, when released, is designed for serious users. Targeted primarily at Mega STers (although there isn't any reason why 520 and 1040 owners shouldn't join in the fun), the series includes HyperPaint, HyperChart, HyperDraw, HyperPlan and HyperProject. Hurry up Atari - get these products out! If HyperChart is as good as Davrelle's PC version (and the others live

up to the hype), the ST just might be treated as a serious business machine. And not something simply for shooting sloshed Santas from the sky.

DTP Update

Not so long ago AMS were a force to be reckoned with. When a new product arrived from them - usually after several name changes - it was generally raved about and worth the wait. What of their first ST product which has been waiting in the wind for over six months? Yes, it too has been subjected to a name change from Finesse Paint to Flair Paint. Hopefully the package won't go the way of the machine.

Fontastic formatting

Scientific and academic users of the ST will be delighted to learn of a source for Tex and Metafont, the popular document formatting and text processing programs in those communities and more usually found on Unix workstations.

German publisher Tools has various implementations of both programs - with English documentation - at prices between about £70 and £100. They will run on any ST with 1Mb or more of memory, and support most popular printers including the H-P LaserJet and Atari's own SLM804.

More details from Tools GmbH, Kessenicher Strasse 108, D-5300, Bonn 1, Federal Republic of Germany.

AMS is slowly losing its identity since amalgamating with Logitech. Logitech deal in PC paraphernalia and Logitech wants AMS to do the same. There was talk that all AMS's non-PC software would have to go. Flair Paint too. However, the latest news - and it is good news - is that Flair Paint will be coming under the AMS label.

Most DTP software suffers from awful picture editing facilities. Enter Flair. It sits in memory as an accessory and offers the DTP user shape drawing, image shrinking and stretching, huge draw area, picture magnification - in short, everything. I saw Flair at the previous Atari show and was impressed by its

speed and features. Get the product out quickly, AMS - before Logitech decides differently.

On the subject of DTP, DMC's Calamus was originally to be distributed in the UK by Signa, but it now seems that Atari has won the contract. Good news. Calamus boasts a built-in text editor and drawing package, allows text to

viewed at up to 300 dots per inch and has true WYSIWYG output. According to Les Player, Atari's technical support manager, the package should be ready for Christmas priced £399.

All is confusion

Turbo Cup, one of the latest French-brewed titles to be distributed by Loricels UK, comes with a Porsche 944 - model, that is. What will Boots and Smiths make of the package?

Starglider II, which was supposed to come on the dual format disk conceived by Jez San and his Argonauts, confused the hell out of these stores, according to Rainbird. Having both ST and Amiga on one label proved too much of a dilemma. One which Boots and Smiths couldn't handle. They demanded, instead, that Starglider appear in separate ST and Amiga versions - none of this dual format nonsense. Sheesh! Who are these guys?

Finally, a tip for Space Racer from Loricels. This one should make it onto the shelves without a second thought. Burning around on a jet cycle dodging pillars and wasting opponents is fun, but a little tricky. Press F2 to pause the game, F10 and finally space to skip a level.

Richard Monteiro

Railway Games for the PC

Model railways without the mess or expense! Run a railway on your PC! Absorbing railway-based games for IBM PC or compatible (including Amstrad PC and PPC). All games have a save game feature - you will need it! (3.5" or 5.25" disks).



Recent Modern Image games

- RailFreight Buxton - intensive stone traffic in this busy quarrying centre, with classes 20, 25, 37, 40, 45 and 47. Single track bottlenecks make operation difficult, but not quite impossible!
- ShedMaster Finsbury Park - manage servicing and maintenance in this busy depot before the days of the HST. Diesels of many classes must be fuelled, serviced and sometimes repaired in time for their booked duties.
- Liverpool Lime Street 1986 - a hectic morning in this always busy terminus, with north and south Trans-Pennine services as well as London and local traffic and holiday extras. Make sure that each service gets the right engine - electric to Euston and the south, or the appropriate diesel for Trans-Pennine, North Wales or the north.
- Exeter 1987 - still a key point on a summer Saturday, with busy holiday traffic on the Great Western main line, plus Waterloo, Barnstaple and Exmouth services. The remodelled station layout made some things easier, but at times you may wish you could build more platforms!
- Burlington Northern - our first simulation of North American practice, this features the single-track bottleneck line between Spokane (Washington) and Sandpoint (Idaho) in the American North-West. Use your discretion to side-track manifests to let Amtrak and priority intermodal services pass unhindered. Glossary of American terminology provided!

Other games available - send SAE for complete list (sent with each order) Price £14.95 per game incl. VAT, postage & packing (UK or overseas). Payment with order please.

SIAM Ltd. (Dept. NCB11), 1 St. David's Close, Leverstock Green, Hemel Hempstead, Herts. HP3 8LU

16 BIT CENTRE

HOME & BUSINESS COMPUTERS

HARDWARE

Atari STFM Super Pack 1 Meg Internal Drive & 21 Games + ST Organiser, & Joystick & Mouse	349.00
Amiga A500 + 5 Games, Modulator, Photon Paint & Mouse	399.00
Amiga A500 as above with The Works (Scribble - Wordprocessor, Organize-Database, Analyze-Spreadsheet)	459.00
Citizen120D Printer with lead ST/Amiga	139.00
1 Megabyte Drives ST/Amiga enable/disable	99.00
Memorex DS/DD per 10	19.00
Amiga A500 + Commodore 1084 colour monitor	599.00
Amiga Business Pack (phone for details)	775.00
Commodore 1084 Colour Hi-Res Monitor including lead for ST or Amiga	£229.00

MIDI SOFTWARE AVAILABLE PLEASE PHONE

AMIGA SOFTWARE

The Works (Scribble, Organize, Analyze)	£69.00
Studio Magic	£65.00
Deluxe Video	48.50
Sculpt 3D	£59.00
Turbo Silver	£115.00
Deluxe Video	£48.50
Deluxe Productions	£115.00

48 Bachelor Gardens, Harrogate

North Yorkshire, HG1 3EE

Tel: (0423) 526322

All prices include V.A.T & Postage, Courier Extra
All prices subject to change without notice



23

MAKE MONEY FROM HORSE RACING

At last! A realistic chance to knock the bookies for six.

In EVERY ONE of the last SEVEN seasons our racing software (written by racing experts) has shown a PROFIT averaging 22% after tax. Many good priced winners, doubles, forecast bets, etc. - A PROVEN WINNER.

Last National Hunt season 62% PROFIT on recommended races.

Using data from the racing press any FLAT or NATIONAL HUNT race can be analysed EASILY and with INCREDIBLE ACCURACY.

Good value bets are highlighted and a unique veto section overrides top ratings when important negative factors are apparent.

DOZENS OF TESTIMONIALS from delighted customers.

"brilliant"... "many good priced winners"... "absolutely delighted"... "won over £300"... "results have ■ be experienced to be believed"... "amazed by the accuracy"... "my sole means of selecting horses to back"

Complete with full instructions and betting guidance - NO RACING KNOWLEDGE NEEDED. Send for past results and full details to

Brimard
Computer Racing Service



75 COCKERTON GREEN, DARLINGTON, DL3 9EG. (0325) 288483

JOHNS COMPUTER STORE

HOME AND BUSINESS SYSTEMS

Full Range Of Commodore PC's In Stock
Commodore Amiga A500 - £369.00 inc VAT
Atari 520 STFM Super Pack - £369.00 inc VAT

Phone for details of all stock

WE ACCEPT
VOUCHERS

JOHNS COMPUTER STORE

93 GRAHAM STREET, AIRDRIE, SCOTLAND ML6 6DE

TELEPHONE: 0236 47097

D. G. Marketing

for all your

Nintendo

ENTERTAINMENT SYSTEM

Hardware,
Latest games
and Peripheral Requirements

MAIL ORDER ONLY

01-637 5735

or write to:

De Gale Marketing Limited

81 Tottenham Court Road,
London W1A 1EY

WE ACCEPT
VOUCHERS

AMIGA BLITZ

In the picture

The Amiga was one of the undoubted stars of the recent Computer Graphics show. Although it may not be up to the standard of some of the machines present, it certainly showed that you can produce professional graphics on systems costing less than £10,000.

Of the more affordable products, notably a genlock device from Applied Systems and Peripherals at the astounding price of £114. Running on both the A500 and A2000 systems, this undercuts existing genlock devices by at least £100. (Commodore's own genlock board for the A2000 currently costs around £250).

Further back up the price scale, Cotron had a 14" colour monitor at £650 for use with Microway's Flicker Fixer which eliminates the eye-wrenching screen flicking in the Amiga's interlaced mode. A special monitor like the Cotron unit is necessary because ordinary monitors do not have a sufficiently high display frequency to cope with the extra scan lines.

Perhaps of more general interest was the appearance of grey-imported add-on processor boards featuring the top range Motorola processors. One is the soon-to-be-released A2620 board from Commodore which features a 68020 processor and will sell for £1,405, while the other was CSA's 68030 board. Both cards really kick in the afterburners and leave standard Amigas for dead.

Workbench 1.3

The on-going saga of Workbench 1.3 is still unresolved. Although Commodore had promised to have the upgrade here by "the autumn", here we are at the end of October and still no sign of it (watch the news pages - Ed)

Informed opinion says 1.3 is ■ non-essential upgrade - in other words, it might be nice to have some of the new features (and some of them sound rather nice indeed) but it won't be severely handicapping your Amiga if you don't get it.

However, for true Amiga buffs and the merely curious, there are a couple of ways to get your hands on it right now. One is to check out some of the latest US-originated software which has

Workbench 1.3 on it. The other way is to ask an American penpal to buy a copy for you.

Yes, Workbench 1.3 is available in US retailers, priced around \$30.

Incidentally, although it might be "non-essential", Commodore US obviously thinks it's worth releasing; why are European users getting second-class service?

Acorn meets Amiga

On a brief visit to Ariadne Software I saw a preview of a product called Beebulator.

This brilliant emulator lets an Amiga run any program written for the BBC Micro, regardless of whether they're in Basic or machine code.

The product is to be launched by Commodore in January and while it will obviously boost Commodore's drive to get the Amiga into schools and colleges, it can only enhance the

V1.3 main command changes

ALIAS Allows CLI commands and extensions to be renamed with a string, eg, instead of DIR A, you could use FULLDIR to get a complete file list.

AVAIL Shows the amount of free chip and expanded memory available.

FORMAT New option allows quick formatting of old, already formatted disks - faster than erasing them.

GRAPHICDUMP Dumps the front window to printer, with a delay so another window can be selected before printing starts.

MORE Extended TYPE command, allows file display a screen at a time, with forward and backward scrolling and limited string searches.

RESIDENT Allows certain programs to be made memory-resident: a big plus since you can now make CLI commands memory-resident, using them without constant disk swaps or using the RAM disk.

WHICH Searches for a file on any disk and will identify its location in directories.

general appeal of the Amiga, and not just among members of the BBC fraternity who are thinking of upgrading to ■ new machine.

Interestingly, the Beebulator throws some light on ■ general Amiga problem. Someone had complained to me about the slow scrolling on the Amiga when playing the Federation II multi-user game (MUG) on Compunet. Apparently, 64 users manage to respond more quickly than Amiga players.

But seeing a BBC program listing race up the Amiga screen under Beebulator confirms that the problem is caused by the console device in AmigaDos used for standard screen displays. It can easily be avoided by good programmers.

On the subject of Compunet, Nick Green, who originally conceived the system, has just taken over the management, so I expect to see some interesting developments before long.

John Collins



Growing pains

Programmers, (to tweak Parkinsons Law) expand their programs to fill the memory available. At the time of the launch of the QL, a multitasking system with 128K for £400 was quite something. PSION managed (just) to crush their programs into it and left a minute amount for data!

Not so today - never mind a measly 128K being insufficient, a publishing package in development currently is likely to be at home with its recommended text editor only on systems with 890K expansion cards.

Superbasic compilers are largely the reason. No longer does the programmer have to wrestle with 68000 assembler, or burn the midnight oil trying to cut an excess 100 bytes from his code to make it fit. Write it in Superbasic, compile it and Hey Presto! a machine code program. If it doesn't fit - call it an advanced version and sell it for expanded machines only.

This evolution in QL offerings is not without its benefits. It is only now, as pundits declare the QL death throes that many quality packages are reaching the market. Despite all the predictions the QL is holding its own. More than a few companies are making a healthy living from the QL market alone.

The owners with a basic machine must be content with the cut-down offerings these days along the lines of the 1512 specials that appeared for the Amstrad PC. If that market is anything to go by, makers of memory expansions should be gearing up for the run on their products. Without a doubt, it looks as if the big QL program is here to stay.

Games at source

A small Finnish software house has launched a new platform-type game: Spaceman Sam - the source code! The game is on offer at £13 but for an extra £57 you get the full assembler source code plus the in-house

screen and sprite designer systems.

After an hour battling to get the intrepid Sam to achieve his target I think I need the source code to find out how to progress to the next level!

Details from Aholasoft, Kirjurintie 3, SF-05400 Jokela, Finland.

Expansion news

With the Futura becoming a "might have been" and the outlook for the CST Thor XVI unclear, news of a DIY upgrade for the main QL board comes as a welcome surprise.

Quanta member Mike Lilley released details of the new board which cures many of the major niggles of the original design. Switched 128/512K main memory, parallel port, reliable battery backed clock, multiple switched ROM sockets, standard keyboard connectors and five expansion ports are standard features. In development are the hard disk interface, modem card and ports boards.

Prices and availability are not yet confirmed but are expected to be sub £100 for a board needing some populating. Details from Mike Lilley on Royston 61236.

Sector spurs comms growth

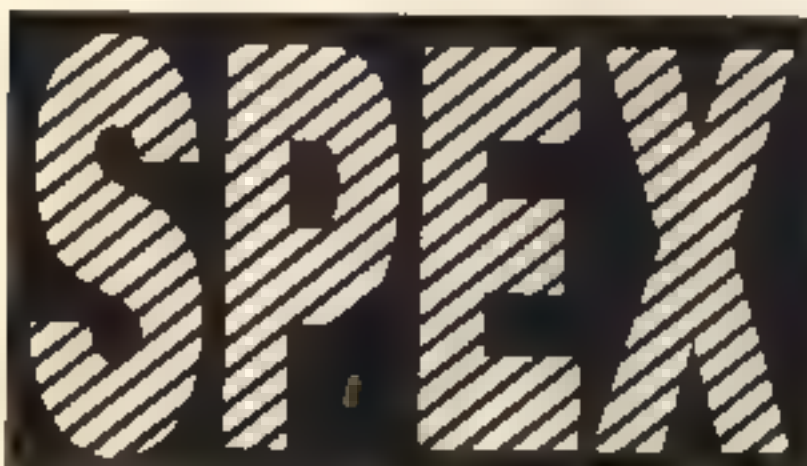
QL communications has gained a new lease of life following the launch of the Sector Bulletin Board running the Q-View software. Its success has made other commercial companies look closely, with the Super User Bureau on-line from mid-September and Digital Precision boss Freddy Vaccha confirming recently that DP is likely to have a board running soon.

Sector has melded its commercial interest and simple QL user support well, keeping any "hard sell" well away from the message pages. Apart from the public board, it provides programming hints, news and advice. No longer do QL-ers have to reside as a Special Interest Group (SIG) in the "naughty corner" of other peoples boards.

Other boards with a currently active QL SIG are Peacenet on 0895-448998 and Gnome at Home on 01-888-8894. Both are viewdata at 1200/75.

Sectors Board runs on 0772-454328 after 6pm and weekends.

Paul R. Connell



Cringing apologies to all Spectrum owners, but due to circumstances beyond our con-

trol we are unable to bring you the Spectrum column for this dummy issue. The person responsible has been chastised with various implements of destruction and normal service will be initiated as soon as possible (ie, next week).

In the meantime, if you have any Spectrum news, views, or information you'd like to share, write to SPEX, at New Computer Express - ASAP.

PUBLIC DOMAIN SOFTWARE AND SHAREWARE

Extensive ranges of Public Domain Software & Shareware available for the following Computers:



IBM PC & Compatibles

including Amstrads
£2.95 per 5.25" disk £4.50 per 3.5" disk

Apple MACINTOSH range

£5.95 per disk

COMMODORE 64 & 128

at £2.95 per 5.25" disk

Commodore AMIGA

from £3 per disk

Atari ST

from £2.80 per disk

CATALOGUES

Catalogues and lists are available for all the above. Please send SAE or phone if you would like us to send you one, or if you would like any further details. Please state clearly which machine(s) you are interested in.

Please note that we have probably the largest and fastest growing collections of PD software for the Amiga in the UK. Details are included on TWO catalogue disks which are £3 each. These can be updated in the future FREE of charge.

ORDERING

Please note that the above prices are FULLY INCLUSIVE of VAT and postage. Orders are normally dispatched within two working days of receipt. We cannot accept payment by credit card

AMIGA A500..... £349.99

ATARI 520STM£259.99

Prices are inclusive of VAT. Full range of software and peripherals available. Please phone for competitive prices.

KINGSWAY COMPUTERS

140 Rushdale Road, Sheffield, S8 9QE

Telephone: 0742 588429

IDS

INTEGRATED DIGITAL SYSTEMS

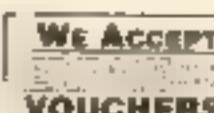
SPECIALISTS IN THE REPAIR OF ALL MAJOR MAKES OF COMPUTER HARDWARE AND ACCESSORIES

- ★ Free estimates.
- ★ 48 hour turn around.
- ★ 24 hour service
(account customers only).
- ★ Television and video repairs entered into.

CALL NOW WITH NO OBLIGATION ON:
CARDIFF (0222) 473757

(24 hour message service).

WE'RE IN BUSINESS TO SERVE YOU!



YOU WON'T BELIEVE YOUR EYES

Have you ever looked at some really excellent computer graphics on screen and thought how great it would look if you could frame it and put it on your wall? Well now you can! We have produced a range of computer art to adorn your walls. Each picture was not drawn, but calculated using complex mathematical formulas, taking many hours of processing to create beautiful images that are beyond description. The images were created on the Commodore Amiga using a resolution of 640x400 pixels in full colour, then professionally photographed from a high resolution / high persistence monitor to achieve the best possible results. There are three sets available, and each set comprises of six different glossy 7"x5" or 10"x8" colour photo's. The sets available are as follows:

PHOTO PACKS AVAILABLE ARE:

PACK 1: DIGITAL FANTASIA

PACK 2: ELECTRIC DREAMS

PACK 3: ASTRAL JOURNEYS

ANY ONE SET OF SIX
7"x5" PHOTOS FOR £19.95

ALL 3 SETS OF 7"x5"
PHOTOS FOR ONLY £49.95

ANY ONE SET OF SIX
10"x8" PHOTOS FOR £39.95

ALL 3 SETS OF 10"x8"
PHOTOS FOR ONLY £99.95

YOU WON'T BELIEVE YOUR EARS

If you are interested in making music with your Amiga, and you already own Aegis Sonix, then read on! If you have spent some time using Sonix, then you will have found that although it is indeed a powerful program, you are limited by the sounds that you can create with the inbuilt instrument designer. You may have been tempted to buy a Midi interface, but unless you buy a very expensive synth, you will not be able to approach the quality and variety of sounds that are on these disks. What we offer is a range of seven instrument disks, each crammed with a variety of exciting sounds, thoughtfully chosen, and professionally digitised, to enable you to unleash the full musical potential of both you and your Amiga.

* INSTRUMENT DISKS * AVAILABLE ARE:

ORCHESTRA CLASSIC
ORCHESTRA MODERN
ORCHESTRA FUTURE
PERCUSSION
BASS AND RYTHM
POT POURRI 1
POT POURRI 2

ANY 1 FOR ONLY £9.95
ANY 3 FOR ONLY £24.95
ALL 7 FOR ONLY £54.95

*** Available only via mail order ***
** All prices are fully inclusive **
Send a cheque or postal order made
payable to BIGGLES ENTERPRISES
to the following address: (Please
state which items are required)

BIGGLES ENTERPRISES

WARNING: You need a copy of
Aegis Sonix to use these disks.

20 DAVIDDOR ROAD, HOVE,
EAST SUSSEX, ENGLAND, BN3 1TT

WE ACCEPT EXPRESS VOUCHERS



COMPUTER LIFE



TEL: DEESIDE 821791

ALL MAKES OF COMPUTER SYSTEMS SUPPLIED
HARDWARE / SOFTWARE

ATARI

BUSINESS OR ENTERTAINMENT

SINCLAIR

16 BIT

ALL PRODUCTS FULLY

PC CLONES

COMMODORE

GUARANTEED

AMSTRAD

WE ACCEPT
VOUCHERS

DISCOUNT PRICES

WE ACCEPT
VOUCHERS

DEESIDE (0244) 821791

WESTONING SOFTWARE

WE ARE THE SAGE SPECIALISTS

	£
Bookkeeper	65
Accountant	99
Accountant +	134
F. Controller	199
Payroll II	99
Planner 2	65

	£
Retrieve III	99
Retrieve IV	199
Chit-Chat	65
Mainlan	266
Mainlan Ext	134

HARDWARE AVAILABLE AT LOW PRICES
EXPERT TRAINING AND INSTALLATION AVAILABLE

FREEPOST, FLITWICK, BEDFORD, MK45 5YR
VAT EXTRA TELEPHONE (0836) 775060



Been feeling depressed about the prospects for your CPC lately? Fear not, because despite the cries of the doomsayers of the last year, there's new life in Amstrad's oldest computer.

It is thoroughly heartening to see Mr Sugar's new advertising for the CPC Computer System, a packaging deal that ought to ensure plenty of newcomers to the fold this Christmas.

Basically, for less than the price of one of the newer 16-bit wonders you get a complete computer system - and the rest.

£500 will buy a 6128 with disk drive, colour monitor with TV tuner (so you need never miss Neighbours again), and a radio alarm clock (to remind you when Kylie is due to appear). There's also a 17-game compilation including old faves like Scrabble and Trivial Pursuit. Oh, and a joystick. And a desk to put everything on, in and under.

But since you've already got a CPC, you'll probably be more interested in the list of forthcoming software goodies, and some excellent stuff it is too.

Heading up the list must be Mediagenic's conversions of two classic coin-ops - Afterburner and R-Type. SDI is also coming from the same source.

Also on the coin-op front, Imagine is promising Typhoon, Guerilla War and Road as well as what promises to be one of the smash hits of this Christmas, Operation Wolf.

Telecomsoft has Savage, a dungeon-delving hack 'em up in arcade style.

The more thoughtful among you should be kept busy with two recent releases from Level 9: Ingrid's Back and the excellent Lancelot, and Magnetic Scrolls should soon release the extremely bizarre Fish! - in which you play, hey!, a goldfish in a plot of intergalactic double-dealing and intrigue (would we make this up!).

Finally, role-play fans can look forward to Pools of Radiance, the US Gold/SSI conversion of the classic Advanced Dungeons & Dragons game system.

Impressive or what?

Amos Walker



Gunning for the cowboys

There has been recent controversy over various cowboy repair outfits performing unsatisfactory repairs on C64 hardware at extortionate prices. Fortunately help is at hand in the form of the Independent Commodore Products Users Group (ICPUG) which is running a regular round-up of repair sharks (and providers of good service).

If you need repairs to Commodore kit, it could save you a lot of hardship if you check it out first, and if you've been ripped off ICPUG would love to know.

Membership to ICPUG provides other useful features such as programming advice and tips, hardware and software reviews and discounts. ICPUG memberships costs £10 a year with a £1 entry fee for which includes a one year subscription to the club's bi-monthly newsletter.

For further details contact: ICPUG Membership Secretary, Jack B Cohen, 30 Brancaster Road, Newbury Park, Ilford, Essex IG2 7EP alternatively telephone (01) 590 8849 during normal office hours or (01) 346 0050 at evenings and weekends.

On-line aid

Another source of information and services is Compunet, the bulletin board originally available to C64

users only (but since expanded to cover the 16-bit upstarts, the Amiga and ST). Membership to Compunet provides you with access to news, advice and tips, on-line communication with other users (party-line) and the opportunity to download software.

This software can be professionally produced (such as previews of forthcoming games) or programs provided by fellow members. Occasionally a real gem of a utility can be downloaded - it's a question of finding them.

Fortunately most UK users can access Compunet at local call rates. If you're interested contact Jane Firbank on (01) 997 2591 or write to Unit 26, Sheraton Business Centre, Wadsworth Road, Perivale, Middlesex UB6 7JB.

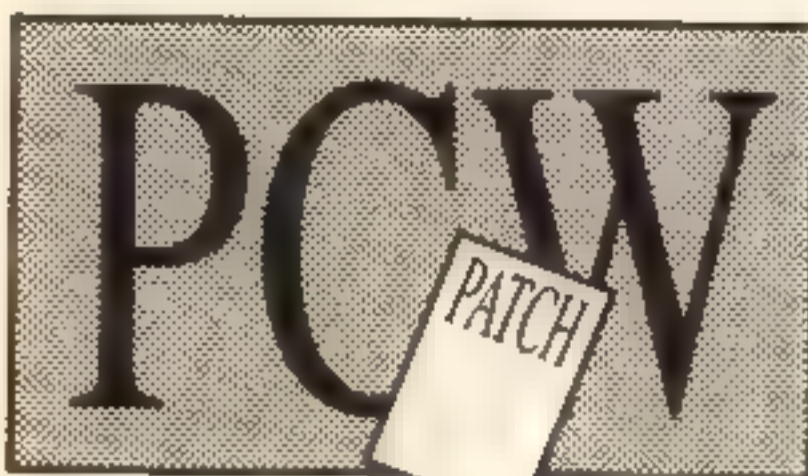
It's show time (again)

Hot on the heels of the PC Show extravaganza at Earl's Court, the 12th Official Commodore Computer Show, returns to its popular and more homely venue later this month.

With over 75 exhibitors displaying their latest software and hardware across the entire Commodore range, you should find something of interest and perhaps even a bargain or two.

The show will be held at the Novotel, Hammersmith, London W6 from Friday, November 18 to Sunday. Details can be obtained from Database Exhibitions, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP. Alternatively you can telephone Show Hotline on (0625) 879920.

Rick O'Shea



More than a typewriter

Welcome to the first PCW Patch. Usually we'll be talking about PCW news, software and technical hints and tips, but we decided to begin by dispelling a few myths.

Most people who have heard of the PCW think of it as just a word processor. But not only are they highly efficient at this task, they also excel as personal computers with a large range of first-class software.

The PCWs come as a complete system, with monitor and system unit, keyboard and printer. When the machine was first conceived, Amstrad and Locomotive Software agreed to marry the hardware and software into an easy-to-use system for word processing.

The keyboard has all the usual alphanumeric and punctuation keys, but also a host of definable and dedicated function keys. This is where the PCW/Locoscript combination really scores over other word

processors - when you need to perform any WP function - find & replace, or moving through the document - you don't have to remember complex commands. Just press the appropriate key.

To make things even easier, Locoscript uses a series of pull-down menus for the most common commands. The simple use of the cursor keys and ENTER makes Locoscript menus a powerful way of learning the software, but once you find your way around menus can slow you down. So, experts can clear the menus and revert to use of keyboard shortcuts.

There are two models in the 8000 series which come equipped with a dot-matrix printer which allows you to create graphics and use different fonts while still producing reasonable quality type.

The 9512 looks different, with the styling of the case looking more like a PC-compatible. Functionally, it is the same as the 8000 series, but comes with

Hit the Flipper

Perhaps the single most irritating thing about the PCW is the fact that while most software runs under the CP/M operating system, Locoscript - the key program - doesn't.

This means that if you want to switch from Locoscript to another program you have to switch off your machine and re-boot with a CP/M system disk.

Or at least, you did until now. With Flipper you can effectively split your PCW into two, having Locoscript in one segment and CP/M in another, or even having two CP/M segments.

This allows you to switch instantly (well, three seconds) from Locoscript into a CP/M program, and then back again without losing your work, or even without losing your place in the Locoscript document.

It will work on any PCW with 512K of RAM, and at 5p under £25 including postage, Flipper must be an essential purchase.

One of those programs that transforms your computer and makes you wonder how you ever got along without it.

More details from Software Imperative, Ashleigh House, Bussage, Stroud, Gloucs GL6 8AZ, or tel 0453-886931.

a daisywheel printer which produces much higher quality type, but does not allow you to print graphics - no good for desktop publishing (although you can add a dot-matrix printer of your own).

The PCW range may not have the technical features of machines like the ST and the Amiga, but for people who require a powerful but economical computer system for use in the home or office, it is hard to beat.

Classic trio saved

Three of the best PCW programs have been saved from extinction by Copy Comm Soft-

ware. The company has negotiated the rights to two of Info-com's finest: Hitch-Hiker's Guide to the Galaxy, and Leather Goddesses of Phobos, both priced at £24.95 which have been dropped by official distributor Mediagenic.

And if solving intergalactic puzzles is not your bag, try programming in dBase II. Copy Comm also has the world's Number 1 database on the PCW after previous distributor First Software pulled out of the business. Price is £67.95.

More details from Copy Comm on 0337-7444.

**Dave Axford
Chris Bryant**

THE FASTEST WAY TO GET NOVICE USERS UP AND RUNNING

3 1/2" DISKS AVAILABLE

Essential PC Training

WE ACCEPT
MASTERCARD
VISA
AMERICAN EXPRESS

TRAINING POWER

DisplayWrite 3/4	£65
Multimate Advan	£65
WordPerfect	£65
Wordstar 3.3 and 2000+	£65
Lotus 1-2-3	£65
Managing with Lotus	£65
Multiplan	£65
SuperCalc 3 & 4	£65
dBase II/III/III+	£65
Paradox	£65
R-base	£65
Excel	£65
Jazz	£65
Symphony	£65
MacCoach	£65
Lotus Macros	£69
Enable	£69
Open Access II	£69
Project Management	£69
SuperCalc 4	£65
Wordstar Professional 4	£65

SKILL BUILDERS

volkswriter deluxe	£43
Intro to Business Software	£43
Intro to Wordprocessing	£43
Intro to Database Mngnt	£43
Typing tutor	£43

*INCLUDES P&P
BUT EXCLUDES VAT



Whether you're looking to train yourself or a hundred - we have the answer with award winning interactive training packages from Office Associates.

Insert the disk and you're away! Progress from novice to competent user at your own pace. You don't even need the actual software as these unique training disks use a split-screen simulation of the original.

Remember that you only pay for this training course once yet it can be used again and again.

Check out our complete range of training packages. 40 packages.

SKILL BUILDERS

DOS 3.2	£43
CP/M	£43
Basic	£43

HOW TO USE YOUR PC

IBM PC/XT	£43
IBM PC/AT	£43
IBM PS/2	£43
TI/COMPAQ/Apple IIe	£43

QUICKREF

Lotus 1-2-3	£69
DOS 3.2	£39
Word 3.2	£69

PC-DOCUREF

Dos/Basic 3.2	£19
Lotus 1-2-3	£19
Multimate Advantage II	£19
dBase III Plus	£19
Microsoft Word	£19
WordPerfect	£19

LAN ADMINISTRATION

LAN Administrators Kit	£250
------------------------	------

OFFICE



ASSOCIATES

Office Associates Limited
FREEPOST Buckingham MK 7BR

Telephone (0280) 817153
Facsimile (0280) 817145

PHONE US NOW ON (0280) 817094 FOR FREE SAMPLER DISK!

At last the real McCoy

FOOTBALL DIRECTOR

SPECTRUM 48/128K
COMMODORE 64, BBC
AMSTRAD 464 (NOT 6128)

£9.99

THE MOST REALISTIC FOOTBALL
STRATEGY GAME YOU CAN BUY

AVAILABLE FROM ALL LEADING RETAILERS

FEATURES

Four Leagues
Twenty Teams Each
Only Eight Game
Season
Home & Away
TV League Cup
Playoffs
European Cup
UEFA Cup
Top Winners Cup
Top League Aggregate
Qualifiers Insurance
Rebuild
Improvements

Players Morale

Field Position
Conceded Played
Future Ltd Scouts
Scored Coach
Skill PWLDFA Points
Physio Youth Team
Sendings Off
Substitutions
Postponements
Midweek Games
Injured Free
Transfers
Transfer Market
Buy Sell Shares
Retirements



GUARANTEED ALL FRANCHISES ARE ON ALL VERSIONS

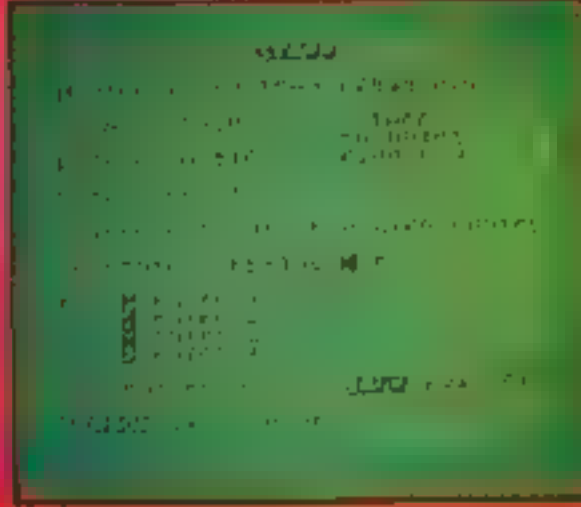
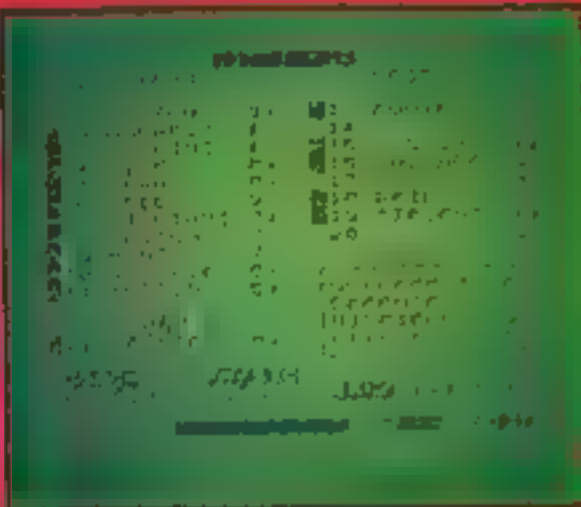
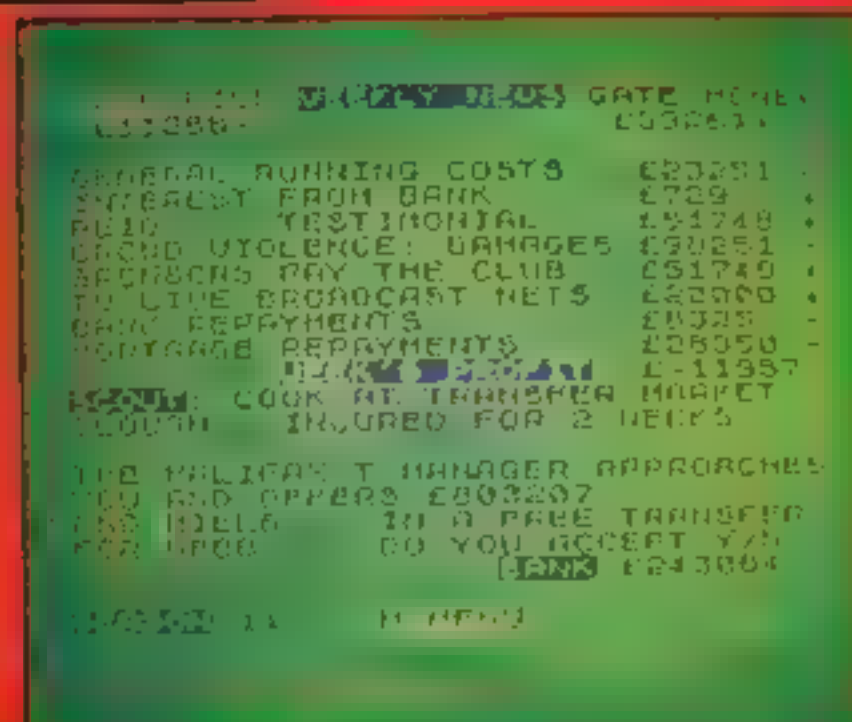
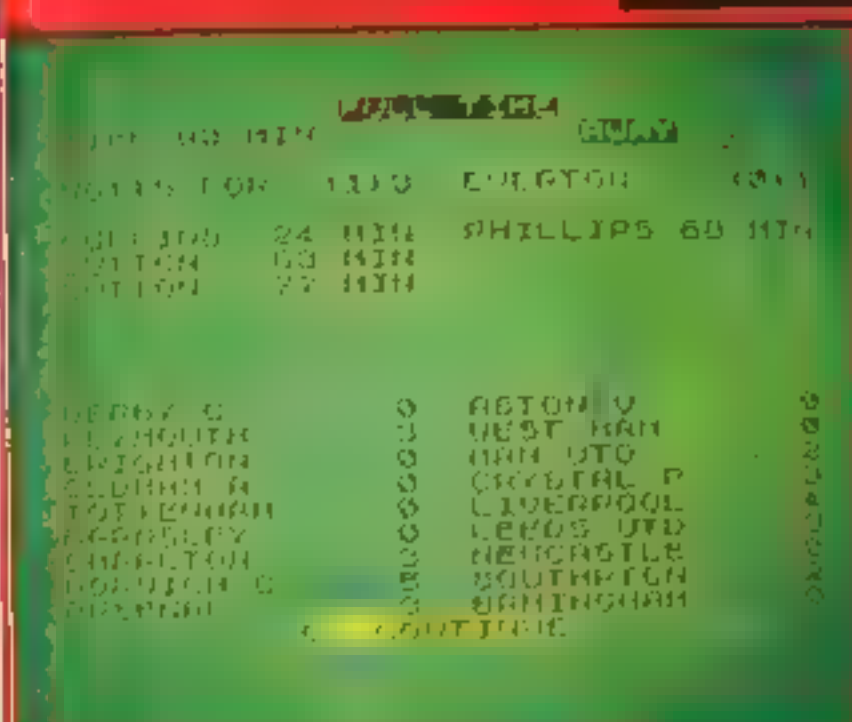
SPECTRUM SCREENSHOTS

International

European Tours
Three Levels
Manager Ratings
Eight Reserves
Promotion
Relegations
Weekly News
Bonusing Mortgage
Save Game
New Game
Season Tickets
New Set
Goal Money

Season Counter

Crowd Violence
Wages Manager
Approaches
Testimonials
Weekly Profile
Name Editor
Team Editor
LMTG Counter
League Titles
Savings Extra
Training



TO OBTAIN A FREE CATALOGUE OF ALL OUR
STRATEGY GAMES JUST ENCLOSE A LARGE S.A.E.

OTHER GAMES STILL AVAILABLE BY MAIL ORDER

FOOTBALL DIRECTOR II					£19.99
CRICKET CAPTAIN					£ 9.99
THE NATIONAL					£ 9.99
BOXING MANAGER					£ 7.99
WEMBLEY GREYHOUNDS					£ 7.99
INTERNATIONAL MANAGER					£ 7.99
2 PLAYER SUPER LEAGUE					£ 7.99
RECORDS FILE					£ 3.99

SPECTRUM 48K SPECTRUM 128K COMMODORE 64 IBM
AMSTRAD CPC 464 AMSTRAD CPC 6128 ATARI ST AMIGA

PLAYING TIPS FOR ALL OUR GAMES £1.00

Cheque/P.O. made out to D & M Games plus a large S.A.E. with 25p stamp attached. Please state clearly which game or games you require & for which computer. Also write your name & address on the reverse side of any cheques. Overseas orders please include £1.50 Postage & Packaging.



DEPT CE, 19 Melne Road,
Stevenage, Herts SG2 8LL
ENGLAND



(0438) 728042

CONTACT MANAGING DIRECTOR MR J. DE SALIS

BEEB BOX

Classic collection

CDS software has just announced a deal with Superior Software to re-release 15 classic Superior games on the Blue Ribbon budget label. Titles such as *Crazee Rider*, *Stryker's Run* and *Codename Droid* will now be available on dual-format BBC/ Electron cassette, retailing at £2.99 each.

Richard Hanson, Superior Software's MD, commented: "The time is right for our superb range of games to enter the budget arena".

The games are scheduled for a staggered release, four titles at a time - with all 15 due within the next year. The first batch of games (*Percy Penguin*, *Mr Wiz*, *Repton* and *Karate Combat*) will be on sale at the beginning of November.

Superior has also launched a new full-price game called *By Fair Means Or Foul* for the BBC/Electron. *BFMOF* is a boxing simulation with the ability to cheat, provided the referee doesn't notice! Available now on BBC cassette (£9.95), BBC 5.25" disk (£11.95), 3.5" disk (£14.95) and Electron cassette (£9.95).

Power computing

SJ Research is currently developing a system capable of running UNIX and MS-DOS programs on the Econet network, using BBC micros as terminals.

SJ Research are convinced their system provides schools with the best of both worlds - a wide range of UNIX/MS-DOS software able to run on existing BBC hardware.

Release date and price details have yet to be fixed but you'll get details as soon as we do.

Two for the show

The Electron and BBC Micro User Show, the premier Acorn exhibition, returns to its popular London venue later this month. With some 70 exhibitors displaying their latest software and hardware across the entire Acorn range, you should find something of interest and perhaps even a bargain or two. Experts will be at hand to answer your questions and give advice on a wide range of technical matters.

This, the 20th show, sees the addition of a new feature - Innovation Row - where you will be able to view the grand finalists' ideas and help decide on the winner.

The show will be held at the New Horticultural Hall, Greycoat Street, London SW1 from Friday, November 11th to Sunday, November 13th.

The doors open at 10:00am and close at 6:00pm (4:00pm on Sunday).

Entrance fees are £5 for adults and £3.50 for under-16s, although by ordering tickets in advance you'll be able to save yourself £1 per ticket. Details can be obtained from Database Exhibitions, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.

Alternatively telephone Show Hotline on (0625) 879920.

Andrew Reece



New hardware

MSX users, might be forgiven for thinking that they are being ignored by the computer press in the UK. With the publishing of Express, however, this state of affairs is over, and MSX users will now have access to information about a far-from-dead format.

First, there is news from Japan regarding ASCII's latest computer. This is the MSX 2+ machine, and although details at the moment are rather sketchy, it is believed to have improved disk handling, a choice of 20,000 colours, and an eight channel sound chip. The processor used remains a mystery - it may still be the humble Z80, or a faster variant. More

details on this machine will be given when it reaches Europe. There are no details as yet of a UK launch.

We also have news, this time from Germany, of a soon to be released hard disk for the MSX 2. This will be a 20 Mb drive, designated the HD-20, with a proposed UK price of between £200 and £300. This price, if correct, will make these drives the cheapest yet available for a home computer - not counting floppies, of course.

Into the Valley

Moving away from hardware and over to the software scene now, all of you eagerly awaiting the release of Konami's *Kings Valley 2* won't have to wait much longer. The launch date is now some time in November, so even as you read this the game may be available. A review should follow shortly, so watch this space.

Two games worth looking out for are *Game Over 2* from Dynamic, and *Afterburner* by Mediagenic. Lets hope they live

up to expectations. These are just a few of the titles soon to be released on the MSX system, so even though hardware support in the UK has almost disappeared, the software houses are continuing to convert titles for the MSX.

Conversion blues

Talking of conversions, two pieces of software I have seen recently seem to be taking the dumping of Z80 code from the Spectrum a little too far. *Colossus 4 Chess* from CDS, and *Hunt For Red October* from Argus Press Software are both let down by poor graphics. *Colossus 4* plays a really mean game of chess and offers comprehensive options, making the game the most difficult I've played on the MSX. The screen display on the other hand is possibly the worst.

The same can be said for *Red October* - the coding seems to be pure Sinclair Spectrum, even down to the limiting the display

options due to the Spectrum's lack of memory. Surely with the MSX's 64K of main memory and 16K of video memory we could at least have a version that matches that on the Commodore 64? Two good pieces of software that could have been better.

Still on conversions, I have just seen some screen shots in a Japanese MSX magazine, and some of the graphics just have to be seen to be believed. You should see the screen shots of the Japanese version of *Zoids*. In Japan this game is available on cartridge, and has obviously been rewritten by the Japanese programmers.

If any of you MSX games players have any pokes, hints or tips, please, don't keep them to yourself. Write in and share them with your fellow MSXers. Even the best games players sometimes need a prod in the right direction.

Keith Neal

The Write Stuff

In the first issue of every magazine (like this one) you'll find an article (like this one) asking for contributions from the readers (like you lot). Why should Express be any different?

And why, indeed, should you bother? After all, aren't you paying us to write the magazine for you? Well, yes - but with your help we can make it even better.

For one thing, try as we might, there's no way we can review every software and hardware product that gets released. The industry is just too big now. And to keep Express

But even if you haven't got experience, we're sure you've got opinions. Share them via Express Mail, our letters page, the fastest way of getting your message across to your fellow users. And there'll be a weekly prize for the author of the wittiest, most interesting, or thought-provoking letter. Starting a user group? Or looking for one to join? Stick a note in the Express Mailbox.

Problems of a technical nature can be addressed to Doc File, our resident medic/psychiatrist for problematic computers and their depressed owners. If

It's news to us

Hardware manufacturers, software publishers, retailers: to get your products into the Express news pages you don't need a glamorous PR firm to buy us lunch at the Savoy (although it helps). Nor do you need to send a sheaf of press releases in a glossy folder with colour photographs (we'd rather have lunch at the Savoy). Just let us know about new products, price changes - anything of interest to computer users is news to us. Write, fax (0225 446019) or phone (0225 446034) and talk to Colin Campbell or Peter Worlock.

sometimes there are basic design flaws that only become apparent after extensive use.

Don't keep them to yourself: share them with your fellow Express readers via Tech Tips, our column for helpful hints.

Furthermore, it's a certainty that among our readers, there exists an untapped source of expertise in all sorts of areas - graphics, sound, communications. Perhaps you'd care to write about it - drop a line to the editor.

you're in trouble with a recalcitrant RS232 connection, or waging a losing battle with your printer DIP switches, write to the Doc.

If you don't feel qualified to participate in such learned discourse, write to Learning Curve, our weekly slot for beginners. We'll be covering all of the basics, plus some more advanced topics, in future issues, but if there's something baffling you right now, write now.

EXPRESS EXPRESS EXPRESS SALES

ALADDINK

FABRIC RIBBON CASSETTE RE-INKING
Trial offer: £1.45 per ribbon
Post used cassette (s) with payment to:
ALADDINK (Dept CE), FREEPOST
EYEMOUTH, TD14 5BR
(No stamp required)
Tel: 08907 50965

SPECIAL OFFER

A501 ram expansion board at £110 + VAT
Amiga A500 at £360 inc. VAT
10% off all Amiga software
For the best after sales support, home tuition of
music and graphic software at competitive prices:
call Michael at **GAINSTAR**
on **0252 877431**
or write to Unit 1, 7 Wellington Road,
Sandhurst, Surrey GU17 8AW

MOUSEMATS

MAKEMICRO MICEMOVE

Hardwearing reversible black laminated
polyester quick fix pads, Size 30 x 21 cms.
SHORE BREAK DESIGNS LTD
High Street, Stalithes, Saltburn, Cleveland TS13 5BQ
0947 840711
£4.50 including VAT and Carriage

COMPUTER-WIZE

10 Wiseman Grove, Sutton
Coldfield, Birmingham. B23 5YG

Authorised-Atari, Amstrad, Acorn, Commodore, Citizen Dealer

Atari 520 STFM Super Pack (inc. £450.00 Free software) £349.00
Atari 12" High Res Mono Monitor (with ST) £129.95
or on its own £134.95

Amiga A500 Packs from £370.00 Ring for details
Cumana 1MB 3.5" disk Drives £89.00
Citizen 120D Dot Mat Printer £149.00
Philips 8833 14" Monitor £270.00

All Software, Hardware and Peripherals supplied
Dust Covers from £4.50

ALL PRICES INCLUDE VAT & NEXT DAY
COURIER DELIVERY ON ALL STOCK ITEMS

DISKS - 3 1/2" DS/DD Branded inc Labels & P/P
£10.00 for 10

Contact our Mail Order Dept (E1) now
24 Hr Hotline - 021-377-6698

FREE CATALOGUES FRIENDLY FAST SERVICE

DISCOUNT SOFTWARE

Up to 25% Off RRP for Atari, Commodore, Spectrum, Amstrad, BBC, MSX and IBM PC.
Ring for information pack on any of the above machines 24 hour Hotline: 0455 613377, 0455 637221

B.Bytes Computer Systems
19 Southfield Road, Hinkley,
Leicestershire. LE10 1UA.
Atari Specialists.

WE WANT YOU!



CAN YOU WRITE COMMERCIAL QUALITY BUDGET GAMES IN MACHINE CODE?

To find out What Players can
offer you write in strictest
confidence to:

SIMON DANIELS
PLAYERS SOFTWARE
(DEPT. NCE),
MERCURY HOUSE, CALLEVA
PARK, ALLDERMASTON,
BERKS. RG7 4QW
or phone: (07356) 77421

GUARANTEED DISKS

DS/DD 48 tpi 5.25"

33p each

min qty 25 • Units of 25 • (38p inc VAT)

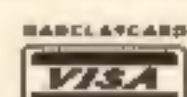
DS/DD 135 tpi 3.5"

75p each

min qty 10 • Units of 10 • (86p inc VAT)



Delivery **FREE** (UK)
0705 511439 (office) 0329 282083 (24 hr)
Cheques/P.O. No:



**ATHENE CONSULTANTS MEDIA CENTRE, DEPT NCE,
16 STOKE ROAD, GOSPORT, HANTS PO12 1JB**

**THIS
SPACE ATTRACTS
ATTENTION!**

New Computer Express can carry your
message effectively and quickly to the
most active computer users in Britain.
And it costs just £7^{vat} per column cm
(so this 3cm 2-column block would cost just
£42^{vat}). Why not call Jennie Evans or Sophie
Lankenau at Express Sales on 0225 446034?

A last look at the events of the week, by cynical old hack Private I



He's the greatest (he says)

"The most important man in the games industry? Oh it's definitely me - it always was, but no one ever realised!"

And just who is making this self-effacing claim? Geoff Brown, the boss of US Gold. Maybe Ocean chairman David Ward. Or even one of those gung holier than thou Yankees like MicroProse's Bill Stealey?

But no. The most important man etc etc is Nick Alexander - and don't say "Nick Who?". Not content with being the nephew of the Tory grandee Norman St John Stevas, witty St Nick now reckons he heads the games pile by courtesy of the Virgin takeover of Mastertronic.

"With Mastertronic, Bulldog, Ricochet, Arcadia, Virgin, Leisure Genius, Melbourne House and Sega, we're now the biggest firm in the industry and are active in every single sector of the games market."

Hardware manufacturing?

"Aside from that."

And shows?

"Aside from shows."

And peripherals.

"Well we do sell those and Mastertronic used to make joysticks."

And magazines?

"OK, and magazines. But we do everything else and sell more than any other firm. And every single sector is growing strongly at the expense of all the other sectors - unless that's the one we're talking

about at the time. As the head of the whole firm, that should make me the most important man in the industry.

"Except for the punters.

They're really important.

"Oh, and the retailers.

"And the journalists.

"But aside from all them, then I'm the -"

The droll fellow has staked his claim. This one could run and run.

No accounting for taste

News that the Archimedes is selling well to Italian schools serves to highlight the exotic nature of both education and computing in foreign parts. They really do do things differently over there.

Not content with having as its Italian distributor the 1808-established G Ricordi & Co (you know them: "one of the world's major classical music and opera publishers"), Acorn has also tied up a deal with the grandly named Istituto Tecnico Statale Commerciale Vincenzo Comi. This loosely translates to Grange Hill Comp, apparently, and is a "technical school for accountants".

These budding accountants are just 14-18 years old and not only do they have to deal with the brain-numbing

Germanic depression

Potential PCW buyers beware. Faced with considerable shortages, a batch of the old Amstrad workhorses has been shipped over from Germany. The problem is not that LocoScript and the manual have been written in that determinedly weird German ShoveitalltogetherwithStrangecapitalsLanguage, but rather that the printer and expansion ports are different.

Alan "It's the chips, I tell you" Sugar's outfit is taking the line that it's "all bloody nonsense", and that there are no difficulties. Well that's all right, then...

subjects of double entry bookkeeping and other financial stunnings, but they also have to do it on Archies.

Sometimes double Math on a Monday doesn't sound so bad.

Tweedledee and Tweedledum dept

That pair of hardware bookends Commodore and Atari really aren't quite the same despite giving the distinct impression of being two halves of the same outfit, there are subtle and revealing differences.

Take the States. Phone Atari out of hours and you're greeted with one of those naggingly cheerful recorded voices, extolling special offers on VCS and ST machines.

And Commodore? You get a sturdy, brusque security guard, demanding to know why you've been rash enough to phone...

NEXT WEEK

R-Type - is it your type?

One of the year's arcade hits, Mediagenic's R-Type has much imitated. Check out the genuine 16-bit conversions of the game that promises to be one of the smash hits of this Christmas.

Back to Basics

Everybody's first language went out of fashion for a while, superceded by modern replacements like C and Modula-2. But Basic is back. On machines like the Amiga and the PC, with products from the likes of Borland and Microsoft, the new Basics are fast, powerful - and still the easiest languages to learn and use.

Plus...

- First for news - from games to operating systems, from Spectrums to PCs, if its news about computers you'll read it first in Express
- First for reviews - new hardware, new software, new add-on products ... you'll find the latest products in Express
- First for bargains - the latest prices and special offers come first in Express

Money off vouchers worth over £4!

The launch issue of *New Computer Express* brings with it an incredible set of vouchers aimed at saving you a fortune when you buy goods through the magazine.

The vouchers are valued from 50p to £2.50 and you'll find FOUR of them free on the front of the launch issue! You'll be able to use them to obtain discounts on orders from all participating advertisers - check out this issue and see how many of the mail order ads carry the 'Express Vouchers' logo. These companies are already offering fantastic deals - add the voucher discount and you're laughing.

● The sign of a good deal!

So not only does *Express* offer you the latest bargains from the industry's leading advertisers, it also offers better discounts than you'll find anywhere else.

It's a brilliant way to buy!

**WE ACCEPT
EXPRESS
VOUCHERS**

Shoot from the Lip...

People who buy these games aren't of our generation. They listen to Wet Wet Wet records and Duran Duran.

Alternative Software on naming its new label Again Again

For discerning Amiga and PC owners everywhere (sorry, ST owners, your computer couldn't handle the graphics!)

Martech press release for Phantom Fighter If girls want knitting programs we'll write knitting

programs and if they want shoot 'em ups with no male presence we'll do that. I don't want to sound 'right on' or anything but we don't want to be a patronising software house."

Leslie Bunder of Audiogenic

It concerns me that some of the so-called captains of our industry continue to launch new products and make new promises without having the ability to deliver.

Commodore UK boss Steve Franklin

On sale Thursday November 10

Don't miss it!

COMING SOON

SPEEDBALL



ATARI ST - £24.99. AMIGA - £24.99
PC AND COMPATIBLES - £29.99

SPEEDBALL - TOTAL ACTION,
TOTAL AGGRESSION - THE
ULTIMATE SPORT FROM THE
BITMAP BROTHERS.

"SPEEDBALL IS FAST, FURIOUS
AND GRAPHICALLY VERY
STYLISH." COMPUTER GAMESWEEK 94%

image
works



The BITMAP BROTHERS

© 1988 THE BITMAP BROTHERS

ARCADE ACTION

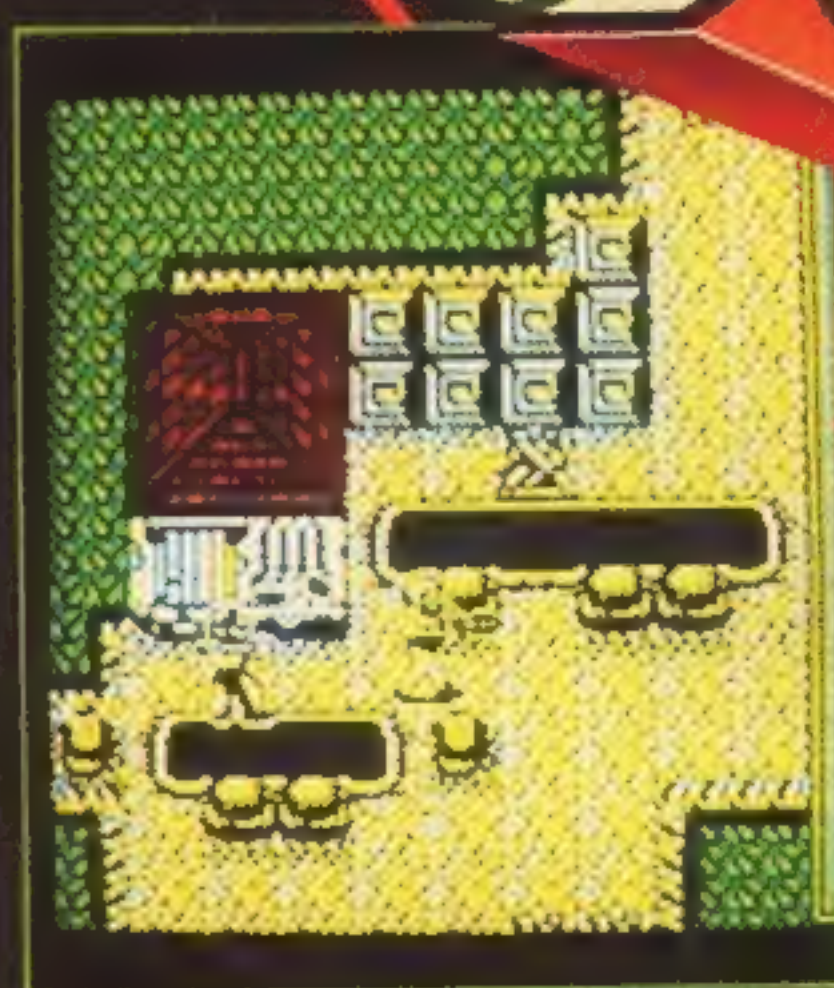
From the SNK stable, the coin-op smash hit now for your home micro. This multi-level, vertically scrolling arcade thriller throws you deep

into the jungles and ruined cities of a nation held in the grip of a cruel oppressor. Freedom is your aim... Guerrilla War is the means!



GUERRILLA

WAR



A M S T R A D
£ 9 . 9 5
C O M M O D O R E

SNK
Shin Nihon Kikaku Corp.
www.snk-electronics.com

S P E C T R U M
£ 8 . 9 5
S P E C T R U M

Imagine
the name of the game

IMAGINE SOFTWARE · 6 CENTRAL STREET · MANCHESTER M2 5NS

TEL: 061-832 6633 · TELEX: 667799 OCEANS G